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This is an alphabetical index of articles and discussions arranged by leading words. It contains occasional cross references. Names of authors and men who discussed the papers are also included. Details of society proceedings, including the titles of papers read, officers elected, etc., can be located in proceedings under Societies, Editorials, News of the State, Marriages, Deaths. The subjects of editorials also appear alphabetically and are marked (E).

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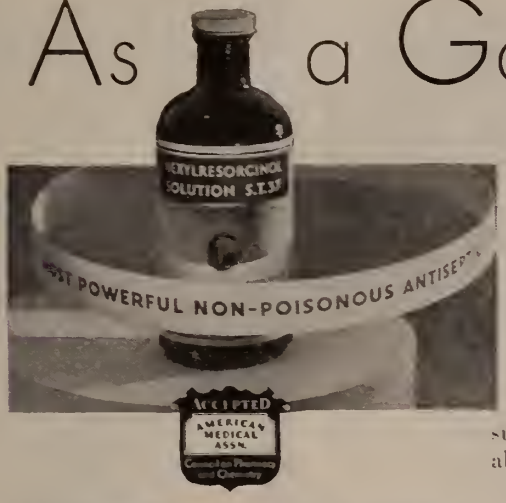
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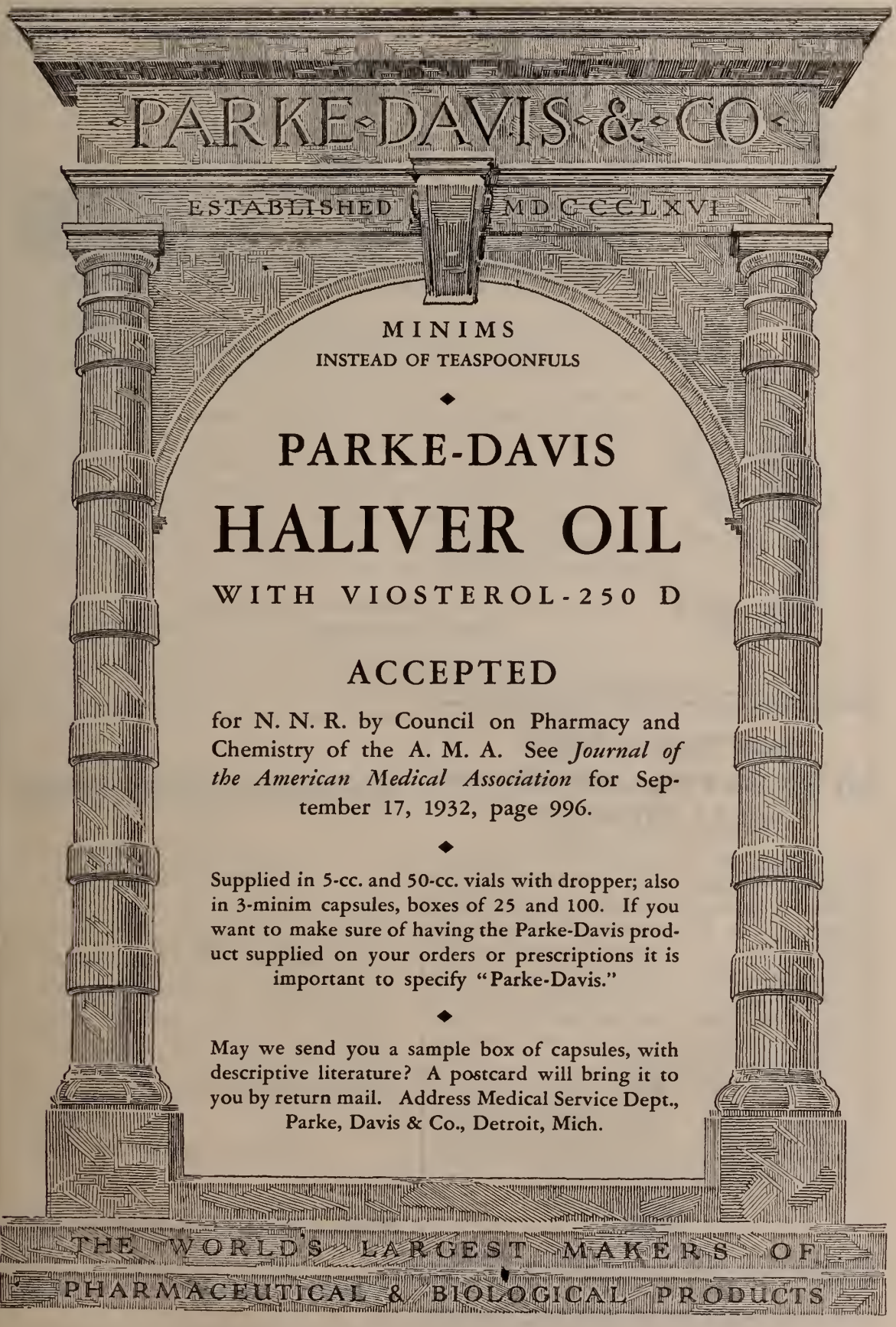
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FIG. 1. The can of syrup* shown above was opened for one-half hour in a bacteriological laboratory to permit withdrawal of a portion of its contents. This was done with sterile pipettes. The can was then covered tightly and stored. One month later it was again opened for the purpose of obtaining more syrup but examination revealed the heavy mold growth pictured above. Growth also developed in two other cans purposely exposed for a brief time. Mold grew in one as early as 7 days after the can was opened.

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FIG. 2. This can of Dextri-Maltose was opened for one-half hour to approximate conditions under which accidental contamination appeared in syrup at left. To make the test more severe, the Dextri-Maltose was also heavily inoculated with a micro-organism which had previously produced thick growth in syrup. The can was then closed and not opened for 40 days, at which time no growth was visible. Later, the can was opened 4 or 5 times for a total exposure of about 1 hour, without the slightest evidence of growth.

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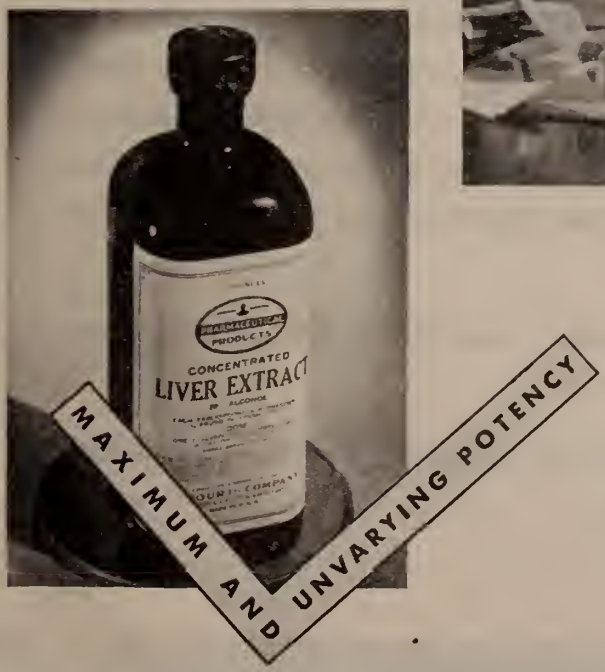
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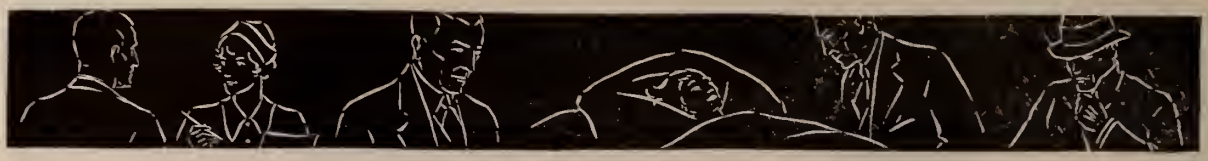




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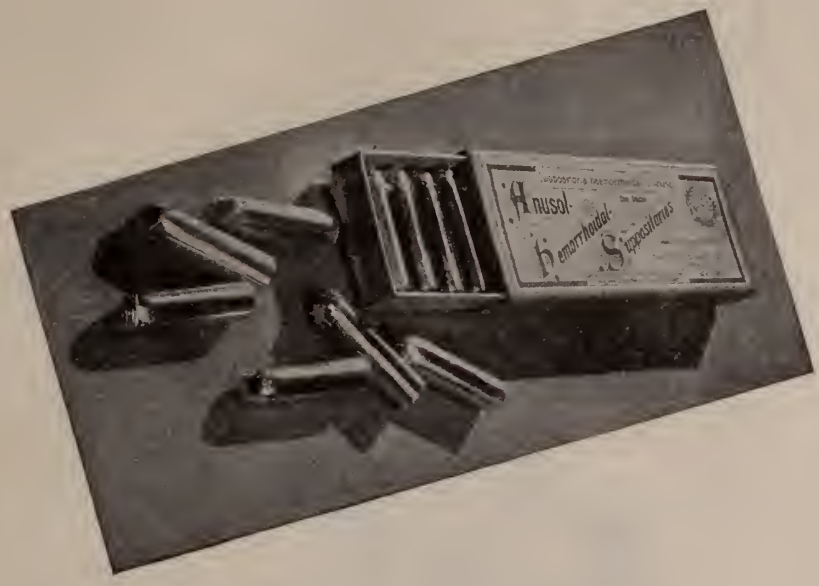
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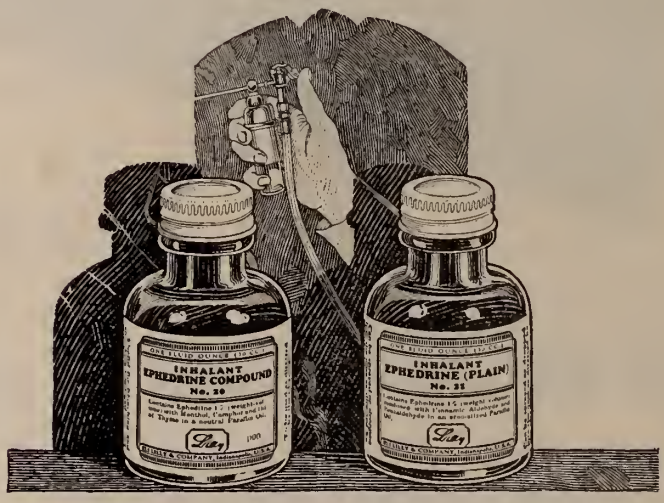
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THE OFFICIAL ORGAN OF

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Editorials

HAPPY NEW YEAR!

And the best way to have it a felicitous twelvemonth is for every doctor in Illinois to set about making it so through concerted effort that will force the laity to keep its hands off the practice of medicine; stem the tide surging towards socialization of medicine; regain an economic balance; end the menace of Universities practicing in competition with their own graduates and of all foundations and corporations and institutions practicing medicine and settle once and for all the question of part pay clinics and political jobbery in the control of the medical profession

"Self help is best help."

We modern men must learn this lesson that built the country; and take to heart the axioms with which our forefathers conquered the wilderness, and survived in spite of the aborigines.

This industrial chaos sweeping the world is no greater a burden than were those that were borne by the early settlers and the heroic Jesuit missionaries that first explored and helped to settle the fertile Mississippi Valley for the King of France. "What man has done man may do." Are we grown so chicken hearted that we shall throw up the sponge and deliver ourselves up to socialization, state medicine and the sovietization of this our native land.

What travesty to the memory of those pioneer doctors who knew none of our modern aids to therapy or surgery! What travesty to manhood generally!

Let us rather adopt that firm resolve of the World War that stemmed the invaders in an almost irresistible rush—

"THEY SHALL NOT PASS!"

The birthright of generations yet to come lies in our keeping. We dare not be false to the trust, either to posterity or to the mother

science. No one will do this work for us but ourselves. We must tend our own bivouac.

And in the doing, as in the doing of all duty, as in the daily sacrifice of every practicing physician's life, will come a reward greater to the doctors, and will accrue a finer salvation for the world of men than can be bought by all the millions and all the commissions of all the self aggregated dictators and misguided millionaire philanthropists that even a most prosperous America might breed.

Yet it must be admitted that out of all the grief and catastrophe and irrevocable woe left in the wake of the year 1932 it was not devoid of a few gifts for mankind. Nothing in all this mundane sphere is so evil as not to learn at least the lesson of terrible example. Out of the chaos and confusion of 1932 has come to the medical profession a reawakened consciousness of the duties of the members of the profession to the mother science, to themselves and to the general public, as well as to our native land, honeycombed as it is by socialistic theorists, and a self-exploiting band of lay philanthropists. But if the year 1932 proved only too bitterly the "winter of our discontent" we can at least pause and remember "If winter comes, can spring be far behind?"

And so, both for men and medicine the year 1933 holds promise of happiness, prosperity and patriotism regained.

THE MAJORITY REPORT OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE HAS BEEN HOIST BY ITS OWN PETARD.

NINETY PER CENT. OF THE LAY PRESS SIDE WITH THE PHYSICIANS IN SUPPORTING THE MINORITY REPORT

The first glimmer of light on the present sad state of medical economics would seem to be countless indications that the flagrant report of the Committee on the Costs of Medical Care stands a chance of being hoist by its own petard.

This would not be the first time in the history of men and of nations that justice to the common good had snatched brilliant victory from what had been seemingly the jaws of defeat of the most ignominious and erroneous nature.

It does not need an expert chemist to announce that the results of five years labor and a million odd dollars spent well if not wisely has produced one of those uncleanly, unseemly, unorthodox combinations known as a stench-bomb and that its creators have landed the missile fairly in their own camp. This is not the first bomb to prove a boomerang.

Even the lay press has commenced to rally to the flag of the faithful, hardworking, occasionally paid individual known as the doctor.

And from one end of the United States to another comes echo of unfavorable opinion of this thoroughly un-American report. The socialization of medicine does not set so well on the stomachs of those by whom this dose of sovietism was destined to be swallowed.

There is scornful protest at the expressed hope of Dr. Ray Lyman Wilbur that this Committee on the Costs of Medical Care might be propagated and that "a continuing organization may immediately be formed to promote experimentation and demonstrations in local communities."

Dr. Wilbur's hope frankly expressed has not so far made him or his heart sick since it is not hope deferred. (What it is doing to wiser men is a different matter.) For Dr. Wilbur already has another committee functioning.

Now, Morris Llewellyn Cooke, an organization engineer, declares that we have come to a point where if we are to survive we must accept the contributions of science and engineering. Which is very fine coming from an engineer, but what has engineering got to do with the practice of medicine?—a lot of machine chicanery, economic jobbery and socialistic tomfoolery.

For Dr. Wilbur's hope took root, grew and blossomed. There has been founded a new group to carry on propaganda for the socialization and sovietization of medicine in America. The name of this new committee is the "American Committee on Medical Costs." Assembling it is the aforementioned engineer, Morris Llewellyn Cooke; Evans Clark, an economist, not a physician, and a director of the "20th Century Fund" that pet philanthropy of E. A. Filene, who having passed his youth in a democracy that permitted him to make millions now appears to be striving with might and main to turn

this democracy into a socialistic chaos so that nobody else will ever be able to have the chance he did, and W. J. Schiefflin, a man who makes proprietary medicines as well as pharmaceuticals. What results this new committee will obtain are more obvious than problematical. Its members, though, should study the public palate and put out findings more sugar coated than those embodied in their previous effort and which have evoked a storm of criticism, indignation, revolt, condemnation, denunciation and even ridicule by the general public, the saner economists, and the medical profession. Especially is the press lay and scientific up to its ears on the question.

Some ninety per cent. of the lay press is against this report. Newspaper comment on the report of the Committee on the Costs of Medical Care is so favorable to the side of the physician and of the minority report that once more faith is justified in the lay press as a national leader and guide.

Some of this comment cannot be requoted too often. Among the citations that have come to this desk are those from the magazine *America* which states editorially under date of December 17, 1932, that:

"After a period of research lasting more than five years, Dr. Ray Lyman Wilbur's committee on the costs of medical care has made its report. The report is not an olive branch, but the opening gun in the battle. It has been denounced editorially by the *Journal of the American Medical Association,* and by leaders in medicine in every city in the country. It is only fair to say, however, that it has been supported with equal vigor by medical men, and, with significant vigor, by men whose connection with medicine is indirect or non-existing.

The New York Medical Society put its finger on the central cause of the controversy when it resolved last May to oppose "political and lay control of medicine." It seems to us that political and lay control is exactly what will inevitably result if the recommendations of the majority report are accepted. These recommendations contemplate a type of State-supervised voluntary system, paid for by groups as health insurance. No doubt this system would make proper medical care available to individuals who now pay their money to "quacks," but it also presents undeniable drawbacks. Obviously, when the patient does not choose his physician, but the patient is chosen for the physician, the relations between the two, once personal, become, rather, a matter of business. "Centuries of progress in the conquest of disease gives us confidence," write the authors of the minority report, "that the individual, and not the group, should remain the unit in medical practice."

With that contention, we agree. State-supervised medicine, voluntary at the outset, will inevitably become a medical service that is State-controlled, and, third-rate. Since in this country, unfortunately, "State-controlled" means in practice, subservience to a group of grimy politicians, the peril inherent in the majority plan is too obvious to call for comment. As the New York *Herald Tribune* remarks editorially, there is no use in saying that the system recommended by the majority would never go that far, "for bureaucracies are never satisfied with small degrees of control." We have learned little from experience if we have not learned that. No greater evil could befall a profession than to be brought under political control, and we sincerely trust that the medical profession will immediately adopt measures to avert the calamity which threatens it."

And again note these other citations:

"The Washington Star"

SOCIALIZING MEDICAL CARE

A majority of the Committee on the Costs of Medical Care, according to a final report filed yesterday, recommends the socialization of medical service. To say that the suggestion is revoluntionary is to make but a mild statement of the fact. But it does not imply the absolute socialization of medicine. That, obviously, is impossible to contemplate.

Clear understanding of exactly what the majority of the committee desires is imperative. In summary it amounts to this: A group practice and a system of group payment would be established, with community medical centers to provide complete medical service, both preventive and therapeutic. The work would be financed by weekly or monthly fees, in the form of insurance, taxation, or both. The poor and needy would be assured medical attention at cost. The scheme, its friends declare, would "provide for the first time a scientific basis on which communities throughout the country (could) attack the perplexing problem of providing adequate medical care for all persons, at costs within their means."

Granted that conditions as they are at present do not merit the unqualified approval of the public, and granted that there is room for vast improvement, the natural question is whether or not this one problem should be separated from all others and organized and protected under State or Federal supervision. The plan suggested by the majority of the committee could not be placed in effect without Government aid. That fact cannot be evaded. It signifies a kind of "public ownership" of medical service. It is in agreement with a tenet of the philosophy of socialism. That means that there would be a danger of political interference. If it succeeded, it would do so in spite of its political connotation. The notion that Government control would end all difficulties is unscientific.

Medical care is but one of the many problems of the people. Food, rent, clothing, fuel, in the order mentioned, also concern them. If it be proper to socialize the one, it follows that it must be proper to socialize the others. The American people in 1929 spent 3,647 millions of dollars to employ physicians, nurses and dentists, to pay hospital bills and to buy drugs and

medicines of various kinds. That is a prodigious sum of money, but it is only a fourth of the total spent for food. The majority of the committee does not suppose that the people would spend less for health under their scheme than they now are spending. To do so would be illogical. Actually, an increase could be expected. Under the new plan the number of patients would be larger. Hence the cost would be greater. True, the expense would be assumed by the whole people and the direct beneficiaries of the scheme would pay only if, as and when they could. Of course, the plan is beautifully idealistic, but why not expand it to include all the other things about which the poor are worried? Why not socialize food and clothing, rent and fuel? Why not socialize education? Why not socialize the lawyers? Why not socialize the clergy? Let there be no mistake about it: If socialization of medical care is right and just, wise and useful, then, by the same logic, a general socialization of life likewise is defensible.

The report is published at a moment when the people are discouraged. It comes as a fruit of the depression. It may be right and it may be wrong. In either case, it is entitled to study. But such examination ought to be unprejudiced. There are two sides to the whole subject, and both should be considered. It should not be forgotten that the American people are the healthiest people in the world and that their ordinary state of wellbeing, culture and prosperity was achieved under what is traditionally known as the American system of civilization, not the Marxian system.

And again,

"The Boston Evening Transcript"

STATE DOCTORS

As a flight of fancy, the majority report of the Committee on the Costs of Medical Care may prove entertaining. It reads like a chapter in a book descriptive of the world conducted on a near-socialistic basis. Thus "the committee recommends that the costs of medical care be placed on a group payment basis, through the use of insurance, through the use of taxation, or through the use of both these methods." Further, there is recommendation that "the study, evaluation and coordination of medical service be considered important functions for every State and local community, that agencies be formed to exercise these functions, and that the coordination of urban with rural services receive special attention." Such recommendations sound very much like an attempt to put the Government into medicine and surgery.

There is the accompanying statement that all this "is not meant to preclude the continuance of medical service provided on an individual fee basis for those who prefer the present method." In other words, the man who is taxed for the support of governmental practice may, if he chooses, refuse to share in the services which his taxes help support, and pay for his medical care from his own pocket. But, in that order of society pictured by the majority report, it may be doubted that the number of those who desired to pay fees on top of taxes would be sufficient to support many physicians in private practice. There is good reason to believe that, were the plan proposed put into operation, the nation would start along the road which in the end would mean the assumption of practically all medical care by governments, national, state and local. That may not be an objection to the program in the eyes of some of its enthusiastic proponents. It is not likely to commend itself to the common sense of the great body of the people.

As far as group medical service is concerned, there is nothing to prevent provision for it under the present system of medical care. There are clinics for those who like them. The patient who would go from specialist to specialist under the same roof has the opportunity. Doctors may differ as to the value of group practice, but it may be and is provided for those who want it, and it is done without transforming such methods into an activity of Government.

The majority and minority reports of the committee, the opposing attitude of the American Medical Association as voiced in its journal, and the comments of doctors and others in their individual capacities, will add for the moment to interest in life. Thereafter, it is reasonably safe to predict this report, like so many others that created excitement upon their appearance, will find place in a pigeon hole, for the time is not yet, if it is ever to arrive, when more than passing notice will be given to proposals to put the Government into medicine on a scale that would tend to make medicine a Government monopoly.

"The New York Herald Tribune"

MEDICAL MASS PRODUCTION

The recommendations of Dr. Ray Lyman Wilbur's committee for the partial socialization of medicine are certain to inspire more confusion and doubt than confidence. The promise that is extended of the elimination of incompetents, exorbitant charges by specialists, "fee splitting" and the further promise of making medical attention available to others than the very rich and the very poor in return for reasonable insurance charges will not dispel the layman's natural repugnance to the idea of making something like a fireman or a policeman of the man with whom his family has its most intimate relations outside the family circle.

The question of the motives behind the Wilbur committee's report was, indeed, raised by the New York Medical Society as long ago as last May when its journal said, among other caustic things: "Political and lay control of medicine has always meant deficient service to the people, with lowered morale and unlimited malingering, enslavement of the physician, decline in the science and art of medicine, increased cost to industry or the taxpayer, or both, and lessened rewards for physicians." With the report itself there also appear two minority reports, the first with exceptionally heavy support, opposing every suggestion of "mass production." This has been given prompt and vigorous indorsement by the American Medical Association, and this has in turn elicited from Mr. Morris Llewellyn Cooke, the new chairman of the Wilbur committee, a public statement in which the spokesmen for orthodox practice are called a "bureaucracy" and denounced for "pussyfooting and compro-

mising." Doubtless there is more of this to come.

Meanwhile the Wilbur report does lay itself open to suspicion by appearing to favor community or state support for what "The Medical Association Journal" calls "medical Soviets" and by making this suggestion overlap upon that of a contract or insurance system. It takes little imagination to see how state support for a kind of medical guild might grow into a political "racket," under which a professional hierarchy would control admission to the guild, the citizen taxed for its support would have no choice of doctor or treatment and the taxpayer's redress for inefficient or perfunctory service would involve something like a Seabury inquiry. The contract system itself is not new. It is pronounced a success in some parts of the world, but has yielded in others a fine crop of unethical practices, as "minority report No. 1" points out. Divorced completely from the idea of state support, the public might concede it the right to prove itself by experiment and experience, but not otherwise.

The theory of the contract system is that when the family man voluntarily agrees to pay a doctor or group a small sum annually for treatment, he and his dependents go to the physician with symptoms instead of advanced ailments. Logically this should result in more preventive work, less serious illness, better fixed incomes for doctors and less cost per capita among all classes. So it has indeed worked out in isolated communities, here and abroad. But, as the minority report shows, no such voluntary system has gone far in Europe without becoming compulsory, while in this country it has usually bred "loss of personal relationship of patient and physician, demoralization of the professions" and numerous abuses. Such testimony does not, however, stand in the way of an experiment which the Wilbur committee and its supporters can make anywhere by getting financial support for a medical center and popular patronage, and by proving then that the system can pay its way without Sovietizing the profession.

The imposition of such a system on the public by propaganda and legislative action cannot be too strongly discountenanced. There is no use saying that the Wilbur committee's system would not go this far, for bureaucracies are never satisfied with small degrees of control over individual liberties. The time to check the growth of such ideas is at their inception, which in this case is the immediate present, and we sincerely hope that the orthodox medical bodies will succeed in doing so.

"The New York Evening Post"

THE WILBUR REPORT

The medical world and the world at large should be very wary about accepting the majority report of the Committee on the Costs of Medical Care of which Secretary of the interior Ray Lyman Wilbur is the chairman. It recommends, as the *Times* briefs it, "socialization of medical care for the people of the United States, based on a system of group taxes and group payments, with community medical centers to provide complete medical service, both preventive and therapeutic, in return for weekly or monthly fees, in the form of insurance, taxation, or both."

We consider this program doubtful in wisdom. It is dangerous from the standpoint of the patient. It creates malingerers. It makes self-pitying hypochondriacs out of people who are free to go to a physician at any time without extra cost.

Secondly, it is bad for the physician. The best physician has been the highly individualistic "old country doctor." The worst has been the "company doctor." Secretary Wilbur's socialization plan seeks to turn the first into the second.

More than that, we believe the plan looks like one more effort to take a vast field of individual action and turn it over to operation by "groups." It recommends the extension of all basic public health services. At a time when we are trying to analyze just how far we can afford our present "socialization" expense Secretary Wilbur comes along and claps another charge upon us.

Heaven knows that the cost of medical and especially hospital care has gone far beyond the point where it can function fairly to meet its needs! But the Wilbur report cannot solve the problems. In the main it tries to dull individual initiative and redistribute expense instead of actually cutting down costs.

"The Philadelphia Record"

MEDICINE—COMBINATION OF MODERN SCIENCE AND MEDIEVAL ETHICS

"In general, pride is at the bottom of all great mistakes."—Ruskin, Morals and Religion.

What's wrong with medical practice?

An eminent committee headed by Secretary of the Interior Ray Lyman Wilbur, arch-reactionary, has spent a lot of time and money trying to answer this question, and has succeeded only in out-Wickershamming the Wickershammers.

Characteristic of this topsy-turvy time, the conservatives have delivered a majority report which involves radical socialization of medicine under bureaucratic government control.

The Record, as a liberal newspaper and a sincere admirer of the great service the medical profession has rendered humanity, resents and denounces such a suggestion. Of all the professions, medicine has responded more sincerely and immediately to scientific discovery. To endanger a continuance of this progress by shackling medicine to political control is to sacrifice one of the greatest assets of our civilization.

But while the majority recommends such an obviously improper remedy, neither majority nor minority report dares to place the blame for the present problem where it belongs,—on the doctors.

Progressive as medicine has been scientifically just so retrogressive has it been ethically. Doctors have clung to an ancient code of conduct that does not belong in this material age. They have taken inordinate pride in a system of ethics which is as outmoded as it is false. That's the reason physicians find themselves in the impossible situation where the majority of them, who are serving the community ably and faithfully, do not receive a decent living in return.

It is the pretense of medical ethics that the doctor dedicates his life to service for humanity and receives

his living from whatever bounty the community cares to accord him. To attempt to apply this medieval ethical system to the modern world has resulted in many absurdities and injustices.

For instance, doctors donate their services to hospitals and hospital clinics. Most of them have no fixed rate of pay, but charge their patient in accordance with their judgment of his ability to pay. This is a relic of a medieval system when the shopkeeper charged the nobleman more than the commoner, but does not fit well into a society where the one-price system is an essential of all business ethics.

The Record is a true friend of the physician, as it has proved itself to be on many occasions by its fights against quackery and cultism. Because it is a true friend, it is its duty to point out the faults of the profession in the hope that doctors will cure themselves and avoid outside intervention.

What medicine needs more than anything else is a new ethical code as up to date and scientific as its therapeutics.

Doctors should be paid by hospitals. They should have fixed rates, which should be shown to any prospective patient. They can well combine in groups but under their own control and without Government subsidy, which means eventual political domination.

Doctors must rationalize professional pride, and accept the humble, usual system of business ethics, according to which the rest of us conduct ourselves.

* * *

If medicine will provide less expensive care for the poor and for the middle classes, if it will relax that wall of professional ethics that has grown beyond its usefulness, if it will recognize social duties as well as individual rights, it need not fear socialization.

The Record, for one, has too great a faith in the intelligence and humanity of the medical profession to think that it cannot cure itself of what are, after all, minor faults. This plea for socialization need not be taken seriously.

Advancement of medical science demands medical centers with equipment and specialists. But this does not necessitate Government subsidy and bureaucratic control.

Medicine must not be socialized.

Says the A. M. A. editorially:

Especially significant, at this time, when a serious attempt is made to socialize medical practice in this country, is an editorial published November 19, 1932 in the *London Lancet* on "Medicine and the State." After tracing the development of the English system to 1926, when "a large measure of socialization of medicine" seemed imminent, the *Lancet* points out that the British Medical Association in 1930 was ready to adopt a "widely extended system of medical insurance." But, it says, "the situation is now very different from what it was two years ago. Excessive claims on sickness benefits and the abnormal burdens falling on the unemployment insurance funds have cast doubt upon the soundness of the whole idea of social insurance, both from the economic and the moral standpoint."

Of course one never expects a theorist, especially a theorist unversed in the science and practice of his theories to learn from experience or actual experiment. So it would be useless to cite the results of sovietization in an even partial way in other countries. How would one dare expect Morris Llewellyn Cooke, organization engineer, to admit that he did not know everything about the practice of medicine from appendectomy to zoophytes?

As the A. M. A. says further: Engineering is Mr. Cooke's business! In 1910 he made a study of eight universities and assailed them for their lack of standardization in curriculums and teaching methods. Is there still any leading educator ready to follow the apostles of standardization? Again Mr. Cooke says, "group payment and group practice are essential for the development of medicine in the United States." Moreover, in support of Mr. Cooke and the majority report comes none other than Edwin R. Embree, president of the Julius Rosenwald Fund, whose views have previously been mentioned in these columns. Mr. Embree is particularly gratified because Drs. Barker, Horsley, Steiner, Roberts, Woodyatt, Bowers, et al. signed with the majority. Finally, the new committee, according to the New York *Times*, has engaged that eminent publicity expert Edward L. Bernays to promote its views.

"Now, the medical profession need not be greatly annoyed, shocked, disturbed, excited or angered by this pronouncement, nor need the physicians of our land be affrighted by Cooke's threats relative to what he is going to do to the medical profession. As THE JOURNAL suggested last week, the reactions of the press of this country to the reports of the committee seem to include mingled amazement and amusement. Bruce Catton, in a syndicated editorial for NEA Service, remarks that the real cure for the problem lies deeper than a mere reorganization of the medical profession. "The wage-earner's inability to pay for the care he needs, and the doctor's inability to get the income he deserves—aren't these a part of a larger problem whose solution depends on

a restoration of economic health to the whole community?''

Getting down to brass tacks and common sense let us examine the situation closely again.

Where is the clearheaded, fair minded individual who will not admit in all truth that:

The physicians of this country form the only group with the training, knowledge and experience necessary for the practice of medicine?

Or that the physicians have been cozened out of their birthright by the invasion into their profession of ''big business'' through so-called endowments, and foundations and similar mock philanthropies that crept in and ensconced themselves because the doctors were too busy to take note of this vicious crime against humanity? Self sacrificing men intent upon their daily, yes hourly tasks of caring for the afflicted, tending the sick, striving for the prevention of disease, how could the doctors be expected to suspect those very fellowmen to whom they gave their best, of such baseness as to play the wolf in sheep's clothing? But the hour is here when no longer can the profession refuse to look straight in the face the problems, the menace, the threatened destruction of the whole structure of scientific medicine by the ignorantly devised and lay inspired schemes whose only virtue is in the money that backs those extraordinary, and incredible, even Machiavellian schemes proposed by pseudo philanthropists, nonmedical economists, public accountants, sociologists and even public health officials with egotistic bees in their bonnets.

Of this last class however it is only fair to admit that some of them who have not gone completely megalomaniac begin to see that it will be a pretty good thing for the practice of medicine when it is given back into the hands of medical men.

As the A. M. A. so ably says:

''The physicians of this country are the only group with the knowledge, training and experience necessary to practice medicine. Intent on their daily and nightly task of preventing disease, healing the sick and ministering to the afflicted, they have given scant attention and but little of their time to a consideration of the way in which their work was being invaded by the octopus of big business. They have been little disturbed by the extraordinary schemes for reorganizing their methods of practice proposed by philanthropists, economists, sociologists, socialists and overambitious public health officials. Now the time has come when they can no longer overlook the problems created by this invasion. Public health officials are beginning to see the necessity of giving medicine back to the doctors.''

Let those who would, without medical training, change the nature of medical practice realize that medicine is peculiarly the doctor's problem. There can be no practice of medicine without doctors. These invaders will find that there are few physicians indeed so unaware of their obligation to medicine as a profession that they are ready, even in such times as these, to sell their medical birthrights for the promoters' mess of pottage.

It is stated further:

''There is, moreover, a far greater concern than the rights of the physician to practice as his knowledge and training indicate is desirable. There is the question of Americanism versus sovietism for the American people. There is the question of the right of the American citizen to pick his own doctor and his own hospital, to pay his own bills with his own money, to be responsible to a doctor who is responsible to him. Let the big business men who would reorganize medical practice, the efficiency engineers who would make doctors the cogs of their governmental machines, give a little of their sixty horse power brains to a realization of the fact that Americans prefer to be human beings. The commissions, the committees, the five year studies and the special reports seem to be a product of the period of inflation when the world went mad over efficiency systems, organizations and standardization. Perhaps the return of rationality associated with the period of deflation will cause this report on the care of sickness to be viewed in proper perspective.''

What a contrast there is between this report of this soviet minded committee and that of the Commission on Medical Education organized in 1925 by the Association of American Medical Colleges.

This report recognizes the *Need for Medical Leadership,* for individual rather than for

group responsibility and puts emphasis upon the *Quality* rather than the *Cost* of Medical care!

This report is not so far distant basically from the minority report of the committee on the Costs of Medical Care, and which was signed by Dr. Olin West, secretary of the American Medical Association; George E. Follansbee, the chairman of the Judicial Council; M. L. Harris, a former President and for many years a member of the Judicial Council, and also Drs. A. C. Christie, Kirby S. Howlett, A. C. Morgan, Robert Wilson and N. B. Van Etten, and Alphonse M. Schwitalla, Ph.D. Moreover, two representatives of American dentistry, Drs. Herbert E. Phillips and C. E. Rudolph, dissent in a separate minority report.

Laity as well as the profession is interested in what action the A. M. A. will take in June when it meets at Milwaukee about this majority report that among other things required,—

Sixty months of study by a staff of workers that ran as high as 100 members.

Of this number seventeen were doctors of philosophy.

In addition to paying their salaries, the $1,000,000 that it cost to run that committee for those sixty months produced the final report that was 221 pages long and strong and 26 volumes of data.

One of the researchers, Edgar Sydenstricker, of the Milbank Memorial Fund, in refusing to sign the report stated that in his opinion it failed to deal adequately with the fundamental economic question which the committee was formed primarily to study and to consider.

This is really almost amusing in the face of the fact that as it has been well said, nobody but the committee seems to take the committee seriously. And probably if a straw vote could be polled the country over it would be discovered that 95 per cent. of the population is better satisfied with its relations "as is" with the family physician than they are with their relations with landlords, merchants, clergymen or their offspring's educators.

Well, they should be. The physician gives his services without hesitation and his is the last bill to be paid. And though the committee on the Costs of Medical care insists that it is out to see that "the doctor gets his" with the lure of government pay for government bossed doctors (which is exactly what will happen if this socialized medicine runs rampant with a heavy tax in an already tax-ridden country) this insistance is nothing but "swamp-fire," an irresponsible will-o-the-wisp to lead the more credulous of the medical profession into a frightful quagmire.

Let it be repeated, that quality of service has always been the thing dearest to the heart of the ethical doctor. This proximity will continue despite the dangling of false ideals by apostles of the soviet.

The medical profession of the United States —the real medical men who know about medicine and not committees of butchers, coal dealers and ribbon merchants, professional philanthropists, or busybodies, —will continue as they have always done. They must fix their economic balance to survive but the scale must be their own, not that of the laity. You do not use the same tables of computation for muslin and denim that you do for wheat, or for milk or for corn liquor. Remember that the laity predominated on that majority report and of the "M.D.'s" whose signature is appended only the lesser number (and a much lesser number) are practicing physicians. Everybody likes control and economy everywhere except on his own job. This report is another evidence of that truth.

The recommendation of the minority group states: "The minority recommends that the corporate practice of medicine, financed through intermediary agencies be vigorously and persistently opposed as being economically wasteful, inimical to a continued and sustained quality of medical care and is unfair exploitation of the medical profession."

Which is quite in line with some of the points made by Dr. William Allen Pusey, speaking for a committee before the joint meeting representative of the Board of Trustees of the A. M. A., and secretaries from state medical societies and editors of state medical journals. In fact these points are so pertinent in relation to the majority report of The Committee on the Costs of Medical Care that their psychological and combative accuracy is almost uncanny. Said Dr. Pusey in part:

"The good of society must be the sole aim of its public policies and the good of the patient

the first consideration in the relations between physicians and patients.

"Experience has shown that the vast majority of disease conditions afflicting man can be most satisfactorily and economically diagnosed and treated by a competent individual general practitioner.

"Medicine's chief concern must be for the individual physician; the service rendered by individual physicians in the aggregate constitutes the great bulk of medical service. The quality of service which is given depends on the competency of the individual physicians who give it.

"The medical profession asks a career of independence under conditions of free and dignified competition.

"In its ideals of independence, medicine has a right to control its own affairs. Its history of capacity to do so and altruism justifies this claim."

CHICAGO MEDICAL SOCIETY COMMENDS THE SIGNERS OF THE MINORITY REPORT OF THE COMMITTEE ON COSTS OF MEDICAL CARE

Resolved, that the Council of the Chicago Medical Society commends the signers of the minority report of the Committee of the Costs of Medical Care as expressing the opinions of the majority of the medical profession;

Be it Further Resolved, that copies of the foregoing resolution be sent to the Editor of the Journal of the American Medical Association, the Editor of the Illinois Medical Journal, and the City Press. Unanimously adopted at regular meeting, December 13, 1932.

THE COMMONWEALTH FUND DOES NOT SUBSCRIBE TO OR APPROVE OF THE PROGRAM OF THE MAJORITY REPORT OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE

The commonwealth fund of New York City is among the foundations determined not to be defiled by the pitch of the majority report of the committee on the Costs of Medical Care and so comes out in a written protest against any such suspected contact and Barry C. Smith, general director of the commonwealth fund, sent this letter in that regard to the Journal of the A. M. A. which appeared under date of December 31, 1932. We reproduce the letter.

To the Editor:—In the issue of THE JOURNAL for December 3 appears an able editorial on the Committee on the Costs of Medical Care. In this editorial are references to "the eight foundations that contributed financial support" and also, later in the editorial, on page 1952, a further reference to "the great foundations" as supporting the principle of socialized medicine.

In order that members of the medical profession may clearly understand that the Commonwealth Fund is not included among the foundations mentioned, I should like to make the following statement.

1. The Commonwealth Fund, although repeatedly requested to do so, has not made any appropriation directly or indirectly to the Committee on the Costs of Medical Care.

2. The Commonwealth Fund does not subscribe to or approve of the program of the majority report looking toward the establishment of socialized medicine.

3. The Commonwealth Fund agrees fully with the attitude expressed by the minority report on the subject of public health, as stated in the second paragraph on page 152 of the minority report.

The policies of the Commonwealth Fund in its public health work are given in detail in the book Child Health and the Community, published by the Fund in October, 1931, which received lengthy and favorable comment in THE JOURNAL, Jan. 2, 1932.

I write this letter not for the purpose of criticizing any person or group of persons but solely in order that practicing members of the medical profession may have a clear understanding as to the attitude and policy of the Commonwealth Fund toward the profession and its work.

DUE NOTICE

The farm problem, as reported by a western Texas paper:

"Positively no more baptizing in my pasture. Twice in the last week my gates have been left open by Christian people, and I can't afford to chase cattle over three counties just to save a few sinners."

UNFORTUNATELY TOO MANY MEDICAL ECONOMISTS CANNOT SEE THE WOOD FOR THE TREES.

NOTE THE STEADY DESTRUCTION OF THE BACKBONE OF THE MEDICAL PROFESSION

The world of medicine is caught in the jam of being a house divided against itself.

For such edifices the axiomatic adage is that such a house shall fall.

Is the division so marked, the fissure so deep that it cannot be bridged?

The bone of contention is the individual versus the community; the practitioner as an individual or as a member of a group or unit, —a paradox resulting in part from the over individualization to a spacious degree of the practice of medicine by an intense wave of specialization and the slow but steady destruction of the very backbone of medical practice, —the general practitioner.

As a substitute for the general practitioner the socialistic misguided laity dabbling in the practice of medicine through endowments, foundations, clinics and boards and government control, offers in various disguised versions the inept, inapt, injurious, insidious black beast of state medicine. Twist it, turn it, braid it, fold it,—do anything you please with it, it is still state medicine, a socialistic product and the first step towards a socialistic state. That changes in medical administration may be demanded by the changing times does not mean that the change of administration means a shift in control, taking the practice and authority of the practice of medicine and putting it into the hands either of the government or of the lay public. Casting about for the bridge that has carried them safely so far, both public and the profession do well to seek the return of the general practitioner.

Which means of course what might be called a majority abandonment of the intensely trained "specialist."

Among thoughtful, deliberative physicians and keen lay economists, of honest perspective, trend away from the specialist and back to the "old-fashioned family doctor" gains daily in momentum.

This is not because conditions and times love the specialist the less, but the general practitioner more. He stands out as a lifeline to craft nearing the reefs of state medicine.

Attempts to effect return of the general practitioner signalize the first movement towards the renaissance of economic balance between the medical profession and the people whom the profession serves, as well as rout of the radicals.

Like signs of spring in April, following "the winter of our discontent," from seaboard to seaboard, from clinic to college, crop up unmistakable evidences of the popular awakening for general scientific diagnosis and general care as a precedent to specific analysis and particular treatment. It is the warning cry of those humanities without which the limbs of the medical profession will stiffen as with rigor mortis.

Further this movement is a bellringer for positive efficiency.

It is dangerous to take specific treatment for an individualized ill until there is a certitude that this individual ill is really a cause and not a contributing factor. The specialist, skilled though he may be and usually is, has not at his hand those forces of insight to command the entire field of the patient and his plane, such as comes to the general practitioner who is familiar as to detailed personal history and family background. All that is one of the most essential details with which a specialist works when such knowledge is transmitted to him, not by the patient, but by a fellow medical man who has the physician's point of view and skilled perspective.

Within the past month this point has been repeatedly driven home though in a left handed manner, before numerous bodies of organized medical men, standing aghast at the ever penetrating knowledge that there is something rotten in the Denmark of our economics and wondering how best to fumigate and clean up the trouble. Unfortunately too many medical economists cannot see the wood for the trees.

Before the New York Academy of Medicine within the past two months Dr. John A. Hartwell stressed the need for medical advisors possessing at least a few of those attributes by which the old-fashioned family doctor played a monumental part in building up our civilization.

Yet in another recent speech, Dr. Charles Gordon Heyd of the New York County Medical Society made no bones of the fact that it

is his opinion that the time is not far distant when the county medical society must decide whether as an organization it shall enter into what may be termed the business of medicine.

If county societies decide that it is necessary to take this diverted path, not until this route has proven itself far from immune to the weaknesses of standardization and at least part failure in human relationship through the dehumanization of the methods of big business that will engulf the profession, will there be any concerted return of that much needed unit, the general practitioner. The public will suffer from the loss of this service, that sets forth its skill in attending to the manifold minor ills of the families that are cared for by general practitioners, and the judgment that directs them where to go in order to get the expert attention of specialists when *That is Indicated*. The public will suffer, too, from loss of that personal relationship between patient and physician and through the substitution of the "business methods" that make a sick man a "case" rather than a "patient."

Wiser heads in the profession hesitate ruefully against the discard of those humanities that have proven almost as valuable in practice as drugs and surgery. True these very humanities compose a large part of the economic drain upon the doctor, that leakage making it imperative that the medical profession shall adopt some means that will enable it to eat, to clothe and to shelter itself. As it is now, such is the economic pressure against doctors that the great bulk of the profession is reduced to polite and clandestine beggary.

It would seem some compromise might be made. The principles that built up the great modern structure of medicine might be invoked for aid, in the process of selective change and indicated innovation. The old-fashioned doctor, functioning as those men did, the man who lived up to the meaning of "the mother profession" can prove as useful to medicine right now as ever the sheltering arms of a mother to a lost and misguided prodigal son.

A Russian revolutionist was being led out to be executed one rainy morning.

"What brutes you are," he cried, "marching me out in the rain like this."

"How about us?" they replied, "We have to march back."—*N. U. Purple Parrott.*

SOCIAL INSURANCE*

CONCLUSION

The purpose of this series of articles on Social Insurance has been to arouse the rank and file of the medical and dental professions and, through them if possible, the general public, to an impending danger; and to dispel a number of quite generally held false opinions.

The first of these is the very commonly held belief that the moment a professional man assumes a title and a government position he knows more and becomes more efficient than he ever was before, while the contrary is more often the case because of the enervating effect of red tape and paper work.

The second common error is that by some magic Compulsory Health Insurance is going to escape the favoritism, nepotism, graft and in fact all of the evils of politics. This is a delusion, with which reformers and the intelligentsia in general are commonly afflicted. The practical man of affairs and particularly the seasoned politician does not fall into this error. Some time ago during a heart to heart conference a practical politician said what he really felt and knew to be true. He said in substance that we must remember that "We have government by politics, and you and I or all of us with a hundred thousand others cannot change this situation. I do not care whether you remove the control from the city to the state or to the federal government, it will still be controlled by politics."

The third common error again held particularly by the reformers and intelligentsia is that statisticians and economists can solve this problem unaided. Desirable, valuable and even necessary to a complete understanding of the problem as a study by competent economists is, there is one very important fact which many who have made a study of the problem do not seem to be able to realize—namely, that in a matter where personal relation is such an important element as in the practice of medicine and dentistry the ordinary formulae employed by economists do not and cannot apply. Personal relations cannot be measured by any mathematical formula devised. It is too elusive a factor to be measured by monetary or any other

*Twelfth installment of Dr. Edward H. Ochsner's articles on Medical Economics.

standards and yet of all the factors it is by all odds the most important. Only the individual who has had an extensive experience in the practice of medicine or dentistry or the one who has had a long and serious illness seems to be able to evaluate properly this phase of the problem. Then again the lack of medical knowledge by economists makes it impossible for them to appraise the difference between the personal individual care of the patient by the private physician and the more or less impersonal mechanical care of the panel or Krankenkasse physician nor are they so situated as to have access to individual patients and even if they had, they lack the training to know which is giving the better treatment. From the foregoing it must be evident that this type of study and investigation has its limitations in cases where the personal element enters intimately with a social or economic problem and if too much dependence is put upon it wrong conclusions are bound to be reached or to re-instate this point a little more concisely let us say that statistics have their value and their limitations. The more personal the matters under investigation the less their value and the greater their limitations. One writer has expressed this idea very well in the following words: "There is real danger that the economist lost in the abundance of his researches finally overlooks the plain and easy road that lies directly before him."

Probably the most common error is the belief that Social Insurance will abolish poverty. To the contrary, it is at best only a palliative and like all palliatives if employed for any considerable period of time always leaves conditions worse than when first employed.

Another common error quite generally made by the more sensitive and emotional is to believe that the receiving of charity is of all things possible the most degrading. Serious as the accepting of charity is to the character of the intelligent and sensitive, there are many other things even worse and one of these is the quite general practice of malingering which Compulsory Health Insurance and the Dole encourage and foster among the workers of a nation. There is this fundamental and very important difference between accepting charity and a health insurance stipend—the former is still considered somewhat of a disgrace while to get the latter, even through subterfuge is considered highly respectable and clever.

There are two questions that the Compulsory Health Insurance proponents have never answered in spite of the fact that they have offered innumerable alibi that do "not alibi" and endless explanations that do not explain. First, why if Compulsory Health Insurance improves the health of a nation as claimed by its proponents is the death rate no lower in those countries that enjoy this "great blessing" than in those countries not so blessed? And, second, why shortly after and since the introduction of Compulsory Health Insurance have the number of days lost by the workers per annum steadily increased? The answer to the first question is that it does not improve the general health of the people and the answer to the second is that among a very large percent of the working population it substitutes for THE WILL TO GET WELL AND THE WILL TO WORK, THE WILL TO STAY SICK AND THE WILL TO LOAF.

Personally I am quite satisfied that Germany and England should make their experiments in Social Insurance and Russia her experiment in State Medicine but I am happy that these experiments are being made three and four thousand miles respectively from our shores. I am firmly convinced that if we can stave off these schemes for another ten years we will be spared them because they will prove so harmful to medical practice and medical progress and so destructive to national character that we will escape their blight. Time will demonstrate that they are fundamentally wrong, a backward step in civilization.

Human progress in most lines has always been very largely the result of unhampered personal endeavor and rarely if ever the result of governmental action primarily. Will we never be able to learn from experience and must there always be recurrent periods of halt and even retrogression in human progress?

American medicine and dentistry stand today at the threshold of their greatest opportunities and beside the abyss of their greatest dangers; the former because of their marvelous advances in the recent past, the latter because they are being pestered and annoyed by a small but vociferous group of misinformed, uninformed, unwise and in a few instances self-

seeking, selfish, self-appointed lay advisers. There are troubled times for these two allied professions; the men who stand firm now will deserve the gratitude of future generations of men and women.

JUDD E. EDWARDS ENDORSED FOR CHIEF INSPECTOR OF THE DEPARTMENT OF REGISTRATION AND EDUCATION

WHEREAS, the enforcement of all laws relating to the practice of medicine in the State of Illinois is a function of the State Department of Registration and Education, and

WHEREAS, said Department has, within the past four years rendered service of inestimable value to the public and the medical profession through its systematic and thorough discharge of its duties in this respect, and

WHEREAS, through the constant and intimate contact of this Society with the Department we can state unequivocally that the high quality of service rendered is due largely to the efficient performance of his duties by Mr. Judd E. Edwards, the Chief Inspector, and

WHEREAS, there remains at this time a substantial number of medical investigations and prosecutions, the successful disposition of which will be determined to a great extent by thoroughly experienced leadership;

Be it resolved, that the Chicago Medical Society go on record as endorsing Mr. Judd E. Edwards for the post of Chief Inspector of the Department of Registration and Education as an experienced, honest and capable public official and respectfully urge upon the Governor-Elect of Illinois, and Honorable Henry Horner, that he appoint Mr. Edwards to this position and thus assure the public and the profession continued protection from the unethical practitioner, the charlatan and the quack, and

Be it further resolved, that this resolution be spread upon the minutes of this society and the officers requested to deliver a copy to the Honorable Henry Horner at the earliest possible date and copies mailed to the following persons: Mr. J. E. Edwards, Chief Inspector of the Department of Registration and Education, Dr. B. H. Sherrard, Secretary of the Illinois State Dental Society, Dr. John R. Neal, President of the Illinois State Medical Society, and to the Editors of the official publications of the American Medical Association and the Illinois State Medical Society.

REPORT OF EDUCATIONAL COMMITTEE TO COUNCIL, JANUARY 2, 1933.

October, November, December, 1932

SPEAKERS' BUREAU

120—Health programs arranged for Women's Clubs, Nurses Associations, Parent Teacher Associations, Mothers Study Clubs, High School Assemblies, Teachers Institutes, Business and Professional Women's Clubs, Kiwanis, Lions and Rotary Clubs, Household Science groups, Librarians, League of Women Voters, College Clubs, Church Societies.

Approximately 10,000 people heard these talks on Mental Health, Thrift in Health, Value of Animal Experimentation, Nutrition and Malnutrition, Relation of Health to School Work, Adolescence, Diphtheria, Cancer, Heart Disease, Patent Medicines, Health of the Child and Adult, Eye, Ear, Nose and Throat Conditions, Prevention of Blindness, Tuberculosis, Control of Communicable Diseases, Skin Disease, First Aid, Posture and the Feet, Periodic Health Examination.

Reports indicate talks were satisfactory:

"Very interesting and inspiring for a group of this kind."

"An exceptionally good talk, well handled."

"Well given and well received."

"Treated subject with a great degree of understanding and knowledge which made the talk all the more helpful and interesting."

"Wonderful speaker and left good impression."

SCIENTIFIC SERVICE

41—Physicians scheduled to present scientific papers before the following county medical societies:

Will-Grundy	Paris Hospital, Paris
DeWitt	McHenry
Rock Island	Bureau
McDonough	Schuyler
Livingston	Perry
LaSalle	Vermilion
Kankakee	Iroquois
Sherman Hospital, Elgin	Jackson

The following subjects were requested:

Endocrinology.

Diagnosis and Treatment of Cerebral Hemorrhage in the Newborn.

Prostate.

Hodgkins Disease.

Mental Diseases and Crime.

Goiter.

Thyroid and Ovarian Disturbances at Puberty and the Menopause.

Recurrent Cholecystitis Following Cholecystotomy.

Diagnosis of Brain Lesions.

Recent Advances in Knowledge of Pernicious Anemia.

The Etiology of Gastric Ulcer.

Spinal Anesthesia.

Neurology.

Premature Detachment of Normally Implanted Placenta.

Principles and Technique of Infant Feeding.
Some Points in the Diagnosis of Cardiac Disease.
Lesions of the Gastro-Intestinal Tract.
The Present Status of Eczema.
The X-Ray.
Medical Legal Medicine.
Pioneering in Financial Prophylaxis.
Cancer.
Gastro-Intestinal Diseases.
Non-Surgical Gynecology and Obstetrics.
Medical Economics.
Gall Bladder Disease.
The Resectoscope.
Otologic and Ophthalmologic Problems in General Practice.

New list of scientific subjects and speakers compiled, sent to Secretaries.

SPECIAL SERVICE TO COUNTY MEDICAL SOCIETIES

Lay educational programs sponsored by the Chicago Medical Society have been announced over the radio following the health talks given by representatives of the Illinois State Medical Society. Announcements of the programs enclosed with all mail going from office of Committee.

Postal cards sent to physicians announcing meetings of LaSalle County, Perry County, Livingston County, Franklin County, Bureau County.

65 Package libraries loaned to physicians.

Scientific medical films and popular health films secured for county medical meetings and clubs.

Notices and program material mimeographed for the Woman's Auxiliary.

Diphtheria material to two counties sponsoring immunization campaigns and special articles to counties where diphtheria was prevalent.

Periodic health examination blanks sent to physicians.

Reprints of Editorials on Report of Committee on Costs of Medical Care from A. M. A. Journal secured for DeWitt County.

Secretaries of Medical Societies offered assistance in arranging programs on "Mental Hygiene" and "The Handicapped Child."

RADIO PROGRAMS

144—Radio talks were given over stations WGN, WJJD, WAAF of Chicago.

A. H. Wolff—Toxemias of Pregnancy.
Walter R. Tobin—Safeguarding Good Health.
Joseph Welfield—Tuberculosis of the Skin.
Edward P. Gramer—Progress of Surgery.
I. M. Trace—The Human Carburetor.
Lowell S. Selling—Reducing Children's Nuisance Values.
Fred E. Ball—Chronic Rheumatism.
N. J. Heckel—Danger of Urinary Frequency at Night.
Francis L. Foran—Coughs.
Henry A. Greenebaum—Grippe.
Charles M. Jacobs—Infantile Paralysis.
John A. Larson—Medical Status of Opinions Relevant to Lie Detectors.
E. L. Compere—The Parathyroid Glands.
Joseph F. O'Malley—Deformities of the Feet.
Max Cutler—Cancer.
Elmer A. Vorisek—Cross Eye.
J. T. Gregory—Appendicitis.
A. Hershfield—The Blues.
Volney S. Cheney—The Critical Age.
Arrie Bamberger—Tularemia.
Reinhold Schlueter—My Child Won't Eat.
John F. Delph—Hoarseness.
Frank Maple—The Expectant Mother.
Frederick Balmer—Menaces to Health.
E. J. DeCosta—Bachache.
S. Litt—Holmes, Semmelweis and the Fight Against Childbed Fever.
A. W. Stillians—Questioning the Skin.
Albert G. Peters—Errors in Refraction.
Percy E. Hopkins—Hernia.
R. Robinson Duff—Great Emergencies.
F. R. Schmidt—Your Skin in Winter.
Vernon Mrazek—Acne.
S. J. Taub—Bronchial Asthma.
Marion S. Fink—Birth Marks and Moles.
H. T. Graverstock—Your Eyes.
Bernard Fantus—Fever.
C. J. McMullen—Diabetes.
G. E. DeTrana—Appendicitis.
P. L. Jeppson—The Heart in Health and Disease.
Irving Treiger—Leakage of the Heart.
R. W. Kerwin—Nasal Catarrh.
M. Z. Albro—The Machinery of Vision.
C. H. Miller—The Use and Abuse of Medicines.
G. N. Krost—Appendicitis in Children.
J. L. Baer—Child Bearing.
Edmund Jacobson—Waste of Nervous Energies.
T. G. Walsh—The Prevention of Colds.
L. N. Katz—Heart Disease as a Public Health Problem.
A. E. Diggs—Injuries to the Knee.
C. J. Drueck—Mucous Colitis.
E. L. Chainski—Your Child's Eyes.
J. R. Ballinger—A Patient and His Doctor.
Paul H. Wezeman—Early Training for Good Health.
Louis Bothman—Care of Cross Eye.
Robert S. Berghoff—Heart Disease in Youth, in Middle Life, in Old Age.
Thomas P. Foley—What About Your Blood Pressure.
Henry Schmitz—Prevention and Importance of Early Diagnosis of Cancer.
S. W. Becker—Diseases of the Skin Due to Nervous Exhaustion.

PRESS SERVICE

2,220—Releases to Illinois newspapers.
1,295—Regular press service.
81—Monthly press service.
165—Home Bureau Advisers of the State, Material on Colds.
69—Community newspapers, meetings Branch Societies of Chicago Medical Society.
8—Association of Commerce, meetings of Chicago Medical.
204—Releases about two meetings of LaSalle County.
82—Notices Southern Illinois Medical Association.
58—Notices, Tri County Medical Society.
62—Newspapers, meeting McDonough County.
71—Newspapers, meeting Livingston County.
31—Newspapers, Franklin County.
55—Newspapers, Bureau County.
32—Releases Randolph County.
7—Newspapers, La Grange, articles on diphtheria and scarlet fever.
33—Press articles written and approved:
Dieting, Fresh Air, Birthmarks, Dangers of Sinus Infections, Percussion, Scarlet Fever—Scarlatina—Scarlet Rash, Tularemia, Deformities of the Feet, Fatigue and Health, Middle Ear Abscess, The American Disease—Appendicitis, Clothing the Young Child, Fever, Diphtheria Immunization, Four Common Fallacies, When Your Child Chokes, Prevention of Colds, Mental Development During Childhood, Mental Hygiene of Adolescence, Children Do Have Appendicitis, Use and Abuse of Medicines, Growing Pains, Cancer, Waste of Nervous Energies, Prevention of Heart Disease, Your Child's Eyes, Anemia, Nervous Breakdown, Crying Babies, Pneumonia, School Lunches, A Common Tooth Trouble, Parrot Fever Warning.

CONTACTS WITH OTHER GROUPS

Conferences with Chairman of Public Health and Child Hygiene of the Illinois Federation of Women's Clubs. Assisted her county chairmen in making contacts with medical men. Furnished them with special material. Reports indicate that these contacts are developing satisfactorily.

Director of Public Health Education and the Deputy Minister of Toronto, Canada, interested in Illinois Educational program and have asked to be placed on mailing list to receive reports of this work.

Requests for information or material from Walla Walla, Washington; Norfolk, Virginia; Manitou, Colorado.

Material furnished two university students to help them in writing theses.

Chicago doctor who is preparing an exhibit on the handicapped child for the Century of Progress asked for list of Illinois handicapped children. Request not granted because some county lists had been sent to secretaries of medical societies, and file therefore incomplete.

A good many county lists still remain in office of Educational Committee. Should these be held or should they be sent to the secretaries?

Educational Committee asked to collaborate with the Chicago Retail Druggists Association in the preparation and censoring of radio talks to be given by that Association.

Adult Education Council of Chicago has asked the Committee to prepare a series of health education talks to be given over radio station KYW during the month of March, 1933. This program has been completed and all speakers secured.

Village of LaGrange, with the consent of the local physicians, has asked the Committee to furnish health columns to their newspapers.

Committee was asked to help Marcy Center of Chicago in a series of health programs for boys and young men.

Englewood Y. M. C. A. of Chicago has asked the Committee to arrange programs for public meetings sponsored in their residence.

Moline Y. M. C. A. secured speaker from Educational Committee to appear in its lyceum course.

Two representatives of Honolulu newspapers asked for report of the Special Committee to Investigate Medical Advertising.

Secretary attended meetings of the Parent-Teacher Associations, American Legion, District meeting of the Women's Clubs, Annual Health Officers Conference, Child Hygiene Advisory Committee, Health meeting of the Educational Directors, Washington, D. C., Annual meeting of the Illinois Society for Prevention of Blindness.

Respectfully submitted,
JEAN MCARTHUR,
Secretary.

CONDITION SIMULATING HUMAN SCLERODERMA IN RATS INJECTED WITH PARATHYROID HORMONE

In the course of the collection of experimental data on rats injected with parathyroid hormone, Hans Selye, Baltimore (*Journal A. M. A.*, July 9, 1932), noted that young suckling rats receiving in some cases only a single injection of 5 units of parathyroid extract intraperitoneally develop within some days a specific skin disease. This condition presents itself first as a hardening of the skin on the back, extending bilaterally from the head to the lower border of the ribs. Within two or three days the hair over these areas begins to fall out and concomitant with these phenomena the skin becomes harder and thicker. Ulceration of these symmetrically arranged affected areas takes place in some parts, and finally after healing a bare, hairless, atrophic skin results. This condition in rats possesses striking points of similarity with the human diseases known as scleroderma and sclerodactylia, in which conditions there occurs a connective tissue hypertrophy in the skin, likewise mostly in symmetrical distribution, together with degeneration of this hypertrophied connective tissue and ulceration of the affected areas. Finally healing results in the atrophic skin over these areas. The author's report offers further substantiation for the concept that hyperparathyroidism is related to scleroderma.

Correspondence

Barry C. Smith, New York.
General Director, the Commonwealth Fund.

WE HAVE BEEN THROWN INTO THE ARMS OF THE NEWSPAPERS, WE ACCEPT THEM AS BROTHERS

Silvis, Illinois
December 13, 1932

To the Editor:

You'll have to dig up the old files now from the cellar and the attic. In response to a request from Dr. John R. Neal that I discuss the abstract of a report of a "committee on the costs of medical care," I found myself driven farther and farther back until his discussion is going to be accompanied by two reprints about health insurance that I wrote in 1916 and 1920.

I know that you noticed that the Dentists' minority report decries "voluntary" and pleads for "compulsory" health insurance. That explains some of the differences between our educational committee and the Dental organizations in matters of policy; we heard of it in 1916 and they did not know about it until 1932. They have not yet digested it.

Really, I am more encouraged than at any moment since 1916. We profit more by the storm of editorial resentment which the majority report has brought over the nation's newspapers than I could have believed possible. You might tell Dr. Hutton when you can that I think we have been thrown into the arms of the newspapers, more intimately than could have been achieved in any other way; they accept us as brothers. That weight of public support and confidence will help us a lot in the argument which is to come. All we have to do when Mr. Cooke speaks to a publication, is to whisper "Wilbur-costs of medical care" and the editor is ours. Even our Moline paper took a pot-shot at it and that column campaigned for Sheppard Towner, for years. I've a hunch that a syndicate supplies the dope for cold editors, anyway.

Mr. Cooke will spread propaganda for another five years if Mr. Filene holds out——— as I get it. But I'd guess five years to be the limit. If there has been no violent revolution by 1937, the outfit *you have been sponsoring and playing for will be sitting on top of the world for another decade or two.* We have reached a crucial point and the public reaction to this report is the crisis. The back-to-the-farm movement will dominate the next five years while the supply of milk for foundationists and bureaucrats will be powerful small. That all makes for individualism as against mass-handling: and this report (?) comes at exactly the proper time. I am not downhearted more than the depression warrants.

Wm. D. Chapman, M.D.

WHAT PRICE SOCIALIZED MEDICINE?

To The Editor: "It is a condition, not a theory, which confronts us" said President Cleveland, in speaking of the Venezuelan situation. Let's call a spade—a spade in considering the other side of the picture presented by the self-constituted and Foundation-subsidized Committee on the Cost of Medical Care, and, in considering it, let us not waste time on the voluminous general report made after "twenty-six extensive studies in all aspects of the problem," but on the only thing the People got, the "Digest of the Wilbur Committee's Recommendations for Changes in Medical Practice" given to the Press (N. Y. Times Nov. 30, 1932) after its presentation to the New York Academy of Medicine the night before; the report was not, then; is not, now; and will not be available—until revamped—and then at $1.60 the copy; some "racket"!

The distinguished Committeemen are concerned with the "maldistribution of income among physicians" and speak about "net incomes" of $3800 in the medium range and $5,300 in the average range" and that, "for every Physician with a net income of more than $10,000 there were two who received less than $2,500," and that "the average General Practitioner had a net income under $4,000, while that of the Specialist exceeded $10,000" and in 1929 there were 70,000 General Practitioners and 30,000 complete specialists"—if you know what 'complete' means.

But — these "average Doctors" surveyed by this Committee must be a naughty lot; they must have played ducks and drakes with their consciences when tabulating those "net in-

comes'' on the Income Tax Returns from which the Committee probably got its data — because, you see, the little old statistician got in his fine work by dividing up ''The Nation's Medical Dollar'' and allocating, or deducing that the

Practicing Physicians get	29.8	cents
Hospitals	23.4	"
Dentists	12.2	"
Medicines	18.2	"
Public Health	3.3	"
Nurses	5.5	"
Cultists	3.4	"
All others	4.2	"

and as the Nation's total bill is $3,650,000,000., of which $700,000,000 is for drugs and medicines (that 18.2 cents supra), then the Doctors, the ''Practicing Physicians'' get 29.8 cents of all those dollars or $1,087,700,000 — but — that report says that there are 121,000 of those ''Practicing Physicians,'' so do a little dividing and you will see that the average ''gross income'' of those physicians must be about $8989., not so bad; not so bad — if true.

That report says that the ''per capita annual cost of medical care'' is about $30. — but, in 1919, the official estimate of the U.S. Bureau of Labor statistics found the cost of medical care in the District of Columbia to be $26 per capita — and — the unofficial estimate of that cost in the State of New York, 1920 (for Compulsory Health Insurance propaganda purposes) was $23.48 — and — the Julius Rosenwald Foundation, about two or three years ago (B.C. — Before the Crash) found it to be $24., per capita. An Average of all these guesses is about $25.84, take it or leave it; believe it or not.

There is one sentence in that report that prepares the informed reader for the Committee's recommendations; it is so familiar to those who, in 1919-1920 had to meet the propagandists of The American Association for Labor Legislation and their co-workers among the distinguished leaders of our Profession. Read it:—

> There is need for some plan whereby the unequal and sometimes crushing burden of medical expenses can be distributed. The prevailing methods of purchasing Medical care lead to unwise and undirected expenditures, to unequal and unpredictable financial burdens for the individual and the family, to neglect of health and of illness, to inadequate expenditures for medical care, and often to inequable remuneration of practitioners.

There are really two sentences, there, and both mean *Control* — and by whom? and how? Read the six ''basic essentials for service program'' and get that sweet appeal to the unwary:—

> 1.—The plan must safeguard the quality of medical service and preserve the essential personal relation between patient and Physician.

and get this choice gem that indicts the American people as fools and the Doctors of their choice as incompetents — the one to be cattleized and the other panelized or shunted into the discard:—(compare it with ''1'' supra)

> 5.—It should include provisions for assisting and guiding patients in the *selection* of competent practitioners and suitable facilities for medical care.

Now, get this summation of the service program in the light of the Committee's guess that the cost of medical care, now, is about $30 per capita (the CAPITALS in the quotation are mine):—

> All needed medical care of the kind customarily purchased, INDIVIDUALLY could be provided, EXCLUDING CAPITAL CHARGES, for from $20 to $40 per capita per annum which equals 40 to 80 cents per week. The estimate is based upon the actual experience of various organizations that are now providing complete, or nearly complete, service for weekly or monthly fees, or without direct charge to the beneficiary.

Why, Lord love you! 'Lodge Practice' has been doing that for a dollar a year, for ages and of course, too, the patient has been getting the same kind of care that he might expect from this glorified State or Nation-wide lodge practice suggested by the Committee.

But — get this fact firmly in your mind; the Foundations that subsidized this ''Five Year (deliberative) Plan'' have interest in just one thing,—centralized control of the Profession of Medicine as *Its* servant, *Not* the servant of the People. All the pretty language with which the report is or may be clothed means absolutely nothing *unless* there be some central power with authority to say to the Physician ''Do this and he doeth; go here and he goeth'' and if any reader of that report believes its recommendations can be consummated without the *Panelization* of the People's Doctors and the *Cattleization* of the People in precisely the way provided in the Davenport-Donahue Compulsory Health Insurance Bill, in New York State, in 1919, and similar bills in other States, all of which were

fought and beaten by the rank and file of the Profession of Medicine, supported by the People they love and serve, then that reader needs a teacher — YOU.

Unfortunately, we who know how to measure the specious language of this report, have no Foundation at hand to provide publicity for the other side of the picture, equal or equivalent to that which has been given to the Committee's report — one whole page in my favorite morning paper, for example — and — to our sorrow and shame be it said, there are too few of us who will take the trouble to analyze this report, ourselves, or to read the analysis of some one else, and there are far too many who lack the moral courage to stand up and be counted in demanding a hearing for the opponents of the majority report or the proponents of the minority report.

In all the five years of their deliberations it never occurred to this Committee to plan, or even suggest, that Hospitals survey *themselves*; list their basic obligations and complete overhead and mark off, against that, the cubic feet of space devoted to medical activities and make it 'carry the freight,' by way of fixed charges for patient-room-space and care, which would include a small margin of profit to amortize the basic obligations — and — making it possible for the hospital to know the *Cost* of making a blood count, a metabolism test, an X-ray series and the like and to add to that *Cost* a reasonable profit to go toward amortization so that it would be possible for any Family Physician to send his patient to the nearest hospital for such aids to diagnosis (or treatment, if you will) with confidence that the patient will get value received for the reasonable money paid and that the Hospital will not, directly or indirectly seek to "lift" the patient from the Family Doctor. "Horrors!" say our distinguished leaders, "This is calumny!" No — it is fact and one of the great reasons, based on the Law of self protection, why patients are sometimes deprived of the advantages of advanced Medicine. "It is unthinkable" say the exalted ones, that "a Doctor; a soldier under the white flag of mercy, should hesitate, under any circumstances, to subordinate himself to his patient's weal!" Unthinkable or not, it is a fact, just as it is a fact that "if a dog bites you once, it is the dog's fault; if he bites you twice, it is your own fault." and do not get the foolish idea that I am exploiting a personal grouch; I am not; I simply observe closely and listen sympathetically and I talk with knowledge, now, as I did and have talked since I helped my colleagues understand and defeat Compulsory Health Insurance with Maternity Aid in the hectic days of 1919-20.

That I am right, now in warning my colleagues of the viciousness of the plans embodied in that Committee's report you may judge if you will read the "Suggestions for group-payment plan" and note the "Voluntary Health Insurance" to feed "organized groups of Medical practitioners, private group clinics, hospital medical staffs, and *Community Medical Centres,* and Consumers, *Fraternal,* Educational or other reasonably cohesive groups," and "Compulsory Health Insurance," for others. How, in the name of common sense, could such 'soviets' operate and refrain from bargain-day allurements to get the business *unless* the whole was controlled by the State or the Nation, as the holder of the purse, made up by "contributions from employer, employee and the State" and distributed through the tortuous, thirsty sands of Federal or State and local political patronage, proceeding in the tiniest of rivulets, toward the Agencies of Healing who, through ignorance, indifference or neglect permitted their distinguished leaders to bind them and their glorious Profession to quantity, rather than *Quality* service to the People.

It is encouraging to see that the American Medical Association is not in sympathy with the Socialization of Medicine recommended by this self-constituted, Foundation-subsidized Committee on the Cost of Medical care and its successor, the American (?) Committee on Medical Costs.

Let me nail one particular lie in that Committee's "Digest," a particularly inexcusable lie because the Committee had a Million dollars and five years' time to learn the truth; it is the age-worn splurge of the Compulsory Health Insurance Propagandist, all dressed up in heavy type and put in a box.

Diseases take more lives than our Army lost in the war.

Human life in the United States is being wasted as recklessly, as surely, in times of peace as in times of war.

U.S. Forces killed in the World War.....	50,285
Killed by Tuberculosis, 1930	88,088
Killed by Cancer, 1930, ...	119,818
Infants' Deaths, 1930, ...	135,845
	343,751

But — If I were to go "Back to Harlem" (N.Y.) and, looking about me, say:—"There are more colored people in the United States than there are whites," those propagandists would be the very first to cry out on me, "Shame upon you! Dr. O'Reilly — be fair; you are bound by the fact that the colored people constitute only 9.7% of the People of this country; how dare you make such a declaration from observation of *Numbers* in a distinctly colored section of a City?" and they would be just as right as I am when I demand that they, too, be fair and not deceive the people of this Country. There were 4,727,988 Soldier-population in the 11 months we were actually in the war and 50,285 "Killed" was 1-6/100% and the 343,751 deaths from Tuberculosis, Cancer and Infants' diseases were only 28/100% of the population of the nation (122,775,046) — and — among the soldier-population in the war there were 74,426 other deaths from "Natural causes, Homicide, Suicide, Accident, Drowning, Executions, and other causes," which makes the total war-death-rate 2-63/100% as against the national death rate in peace, in 1929 and 1930 of 1-19/100% so let them "laugh that comparison off."

Well, what are *You* going to do about it? Here is what I shall do: I shall write the Chief of Staff of every one of the 53 Hospitals in Brooklyn (Kings County, N.Y.), asking him to read my letter to every member of his staff; in it I shall remind them that "In days of old when Knights were bold" and honor held full sway, if a Military Corps was smirched in its honor, the stain could be removed in only one way; by the Corps *Decimating Itself*; the men would be lined-up and "count tens" and every tenth-man would step forward to be shot; that if the preservation of honor be as important as the purging of dishonor, it might be well for such groups to "count tens" and every tenth-man assume the solemn obligation to see to it that himself and the nine who preceded him in the count would attend every meeting of the County Medical Society, *Right Through the Business Sessions,* month after month until this debacle — this stampede toward Sovietized-Medicine is stopped and the public mind led through paths of reason to solve its public and private health problems by means that would be in sympathy with the ideals, traditions and institutions of this Country — not Russia. That their interest and attendance would tend to neutralize the Socialistic-communistic Left-Wing in the Society and prevent precipitate, snap judgment until it would be possible to get a copy of that suppressed or witheld report, have it analyzed, section by section, by a properly equipped Committee of our own County Medical Society and submitted to the Society for its determination by judgment and reason rather than impulse and hysteria; that snap judgment, at this time, would cast dishonor on our County Medical Society and betray the People who have a right to look to us to stand between them and danger. How about it? An informed American People never went wrong — and never will. Go to the People with the *Facts!*

JOHN J. A. O'REILLY (M.D.)
642 Union St.
Brooklyn, N. Y.

HEALTH RADIO PROGRAMS ARE APPRECIATED BY THE PUBLIC

November 30, 1932

Radio Station W J J D
Chicago, Illinois.
Gentlemen:

While I have always felt that those who entertain and instruct over the radio miss keenly the appreciation and stimulus of the applause of a public accorded in other circumstances to many who are not as deserving, I have always hesitated writing a radio station, with the same hesitancy that stays the clipping and signing of the "attached coupon" of an ad.

I am however breaking my rule in this case to express my appreciation to the Illinois Medical Society for today's talk by Doctor ———. It was excellent. I have missed this period before.

You do not know how refreshing it is to be able to listen in with a confidence that this is NOT an "M.D. Salesman" for yeast, milk, or some "cure-all."

Very sincerely—

AUXILIARY NEWS

December was a busy and successful month in the organization of new county auxiliaries, and we take great pleasure in welcoming to the Illinois State Auxiliary two units. All organized counties and members of the State Board extend greetings and good wishes to these young organizations and hope for a healthy continuous growth and enthusiasm.

Mrs. A. B. Middleton, Councilor for the Second District reports the organization of the Livingston County Auxiliary. Mrs. Solomon Jones, President-Elect and Organization Chairman visited Bloomington and aided in the consumation of organization plans for this county unit.

The officers elected are—

President—Mrs. E. G. Beatty, Pontiac.

Vice President—Mrs. O. D. Willstead, Chatsworth.

Sec'y and Treas.—Mrs. H. L. Parkhill, Pontiac.

Livingston County Auxiliary starts out with eleven charter members.

Marion County has also just completed organization of a Woman's Auxiliary to the Marion County Medical Society, and on December 2nd the following officers were elected.

President—Mrs. William N. Hamilton, Odin.

1st Vice President—Mrs. Walter L. Finn, Iuka.

2nd Vice President—Mrs. Mary Green, Salem.

Secretary—Mrs. F. A. Phillips, Centralia.

Treasurer—Mrs. H. Wilson, Centralia.

Our President, Mrs. E. W. Mueller, 1054 Loyola Ave., Chicago, Ill., met with a serious accident on November 28th. While in her home she slipped and fractured her ankle. Although she will be confined to her home for some time she is able to carry on and direct the activities of the State Auxiliary. While convalescing no doubt Mrs. Mueller would enjoy receiving interesting auxiliary news from the members and officers, for the Auxiliary is always uppermost in her thoughts.

We hope for a rapid recovery and extend regrets to Mrs. Mueller.

The November meeting of the Douglas County Auxiliary was held at the home of Dr. and Mrs. G. H. Fuller, Tuscola, and was in the form of a Potluck Dinner and Bridge. During the business meeting Mrs. Myron Boylson, Tuscola, was appointed Publicity Chairman.

St. Clair County Auxiliary continues to have enthusiastic meetings, and the December meeting was held at St. Mary's Hospital, East St. Louis, with 32 members present. A report on several articles published in "Hygeia" was presented by Mrs. J. J. Donahue.

Correction—Item in last month's Bulletin stated "North Shore Branch holding monthly meetings at various hospitals." This should have read *North Side.*

Mrs. F. P. Hammond, *Chairman*
Press and Publicity.

"I THOUGHT IT WAS ONLY A SORE THROAT, BUT THE DOCTOR SAID . . . DIPHTHERIA"

A Mother's Confession

"I was young, and my husband's salary was very small. So, when my four-year-old son got a sore throat, I thought I would treat it myself.

"I had watched the nurses in the college infirmary 'painting' sore throats, and preparing gargles. I followed their example, and was very proud of myself.

"But my son's throat became worse instead of better. I put him to bed and kept compresses on his throat for two days. The following morning, I found him so sick that I became very frightened, and called the doctor.

"'It's diphtheria,' he said, after making his examination. 'He should have had antitoxin three days ago.'

"I don't know how I lived through those next few days. My boy seemed at the point of death, and I was responsible. The doctor was my only hope. Instead of chiding me for my stupidity, which he had every right to do, he did his best to comfort me and his interest and attention assured me that everything that could be done was being done.

"Finally the doctor was able to tell me that my boy would get well.

"My boy did get well, but I shall never forget the agony I went through because of my stupidity and neglect."

Original Articles

THE MANAGEMENT OF TABETIC OPTIC ATROPHY*

GEORGE F. SUKER, M.D., F.A.C.S., AND MAX M. JACOBSON, M.D.
CHICAGO

The management of tabetic optic atrophy necessitates a careful consideration of the pathology found in tabetic optic atrophy according to the knowledge that we possess of it at the present time. The difficulty from the start is that up till the present we have been unable to use prophylactic measures to combat this affection, which of course would certainly be ideal. It seems that a more thorough investigation and observation of the period elapsing from the time of primary inoculation to the manifestation of early central nervous lesions are indicated. In dealing with such cases that are diagnosed early, the certainty of the disease must be established by all methods of examination, so that the result is a group of cases, the course of which we are attempting to influence. The case carefully and accurately diagnosed, we proceed to a thorough investigation of the visual functions so that a control is had and continuation of such examination throughout the course with ultimate conclusions being withheld until a proper time interval has elapsed. Also we must well guard our enthusiasm in the results obtained because the course of disease while being progressive loss of vision, has remissions.

The literature is filled with articles pertaining to the treatment of tabetic optic atrophy, not because we know so much about it, but because we know so little about it, and as a natural sequence, various authors report favorable and unfavorable results. The reason for the authors' choice for a certain method in the management of tabetic optic atrophy is the result of one case which was reported by Dr. S. R. Gifford[1] in 1923 (this case was recommended to the senior author for therapy) as Gifford claims the result is most promising providing the procedure was actually responsible for the improvement or was it because a remission had occurred? Apparently a positive spinal fluid Wassermann was altered into a negative fluid and the vision was definitely improved and remained as such for two and one-half years until an accidental death terminated the picture. It is quite unfortunate that such a case could not have been followed for a much longer time and that a post mortem was not obtainable. Returning to our original statement, we must discuss the pathology of tabetic optic atrophy, for the whole question of treatment depends upon it.

We must reconstruct our conception of so-called primary tabetic optic atrophy caused by toxins produced by syphilis elsewhere in the body as was based on the examination of nerves by Cruveilhier, Virchow, Uthoff, Leber, Papow and others (these authors found simple gray degeneration of nerve fibers without any signs of inflammation). Other authors such as Moxter, von Michel and Glicksmann found the degenerative processes most marked in the retinal ganglion cells and the theory was advanced of an ascending atrophy beginning in an injury to these cells by the toxins. Most of these pathologic examinations concerned only a small number of eyes that may have undergone cadaveric changes and also these eyes represented late stages in the disease.

Keraval and Raviart[2] found evidences of degeneration in the retinal ganglion cells and also proliferative changes in the nerve and its vessels. Marie and Levi[3] examined the optic nerves of 60 tabetics and paretics, finding in the atrophied nerves evidences of previous active inflammation in nerve and visual tract. Because of the nerve and tract changes being so marked and the retinal ganglion cells so mild, they concluded that the first lesion in the nerve is the ordinary peri and endovasculitis of tertiary syphilis producing secondary optic atrophy.

Stargardt[4] was led to similar conclusions after examining the complete visual apparatus, brain and in some subjects also the cord in 21 cases of tabes and paresis and compared the changes with field defects found during life. In all of the 13 cases which had shown optic atrophy during life, evidences of active luetic inflammation were found at some point in the nerves or visual tracts. These consisted in an infiltration chiefly by plasma cells, extending into the

*Read before Section on Eye, Ear, Nose & Throat, Illinois State Medical Society, Springfield, May 18, 1932.

nerves along the pial septa and the pia surrounding the nerves and chiasma and being especially marked about the central vessels at their entrance into the nerve. In 8 early cases showing these changes in the nerve, no changes were noted in the retinal ganglion cells, which would seem to speak against the theory of retinal origin. Stargardt concludes that luetic optic atrophy is a secondary atrophy, due to changes of late syphilis such as found elsewhere in the body. We are dealing with apparently a descending atrophy starting in the region of the chiasma, descending rarely to retrobulbar part and which appears ophthalmoscopically as primary. Igersheimer[5] has isolated the spirochete in the sheath of the optic nerve and in meninges near the chiasm.

Such a view of optic atrophy as the result of active luetic neuritis or perineuritis is in line with modern views on syphilis of the central nervous system, although a combination of pathology may be present which may account for some of the variable results reported. If the above view is correct, it offers the possibility of arresting the process with preserving the vision that is present, and in some cases hopes for improvement with retention of such vision. Of course where the nerve is anatomically atrophied we cannot hope for regeneration, although nerves which are temporarily compressed may be helped to restore some of their function. The test of our therapeutic measures must naturally be made not in cases where there is complete atrophy and very little function, but in early cases where results are much easier to observe, and of course much importance must be emphasized in accurate examination of visual functions in cases of suspected neuro-syphilis or of luetic ocular muscle palsies.

As in syphilis of the central nervous system, general treatment in luetic optic atrophy, whether mercury, salvarsan ar neo-salvarsan alone, or in combination, have not had any lasting beneficial effect upon the atrophic process as such. A few authors such as Iwaschenkoff[6] and Nonne have reported moderate success by the intensive use of salvarsan, and with others as Greefe[7], Waldemann[8] reports are given of ensuing progressive blindness with intensive treatment. Hermann[9] Foster[10] Lopez[11] and Feldman[12] report favorable results in the use of bismuth. Another method of attack is the artificial production of hyperthermia by the use of malarial inoculations as practiced in general paresis. Fisher[13], Ascher and Marie, and Morretti[14] have reported on a number of favorable results after such inoculations, while others Elschnig[15], Behr[16], Bering[17], Wagner-Jauregg[18], Havel[19], Messmann[20] and Roggenbau, have seen no effect on the progress of the disease. Wurz[21] reports unfavorable results with the use of typhus. Atropine injections into orbit on basis of relief of spasm of vessels have also given some favorable results according to Abadie[22], Samkowski,[23] and Safran.[24] Friede[25] has had no favorable results with puncture of the anterior chamber. Mauksch[26] has attempted the eradication of a rhinogenic cause of tabetic optic atrophy, but has had no influence on course. Winkler[27] has used sulphur with no particular effect on course of disease. Queso[28] with the use of a colloidal preparation of mercury has had no beneficial results.

When spinal injections through methods of Swift, Ellis and others were first reported, it seemed that this might offer a better mode of attack in optic atrophy. It was soon found however that although some cases of tabes were improved, and some early ones apparently cured, higher lesions such as those of paresis and optic atrophy, did not respond so well. A few good results of spinal treatment in optic atrophy have been reported. Gennerich and Fordyce[29] each report favorable results in two cases. Schacherl[30] Somogy[31] and Zimmerman[32] report some favorable results, also.

With the knowledge that we possess of the circulation of the cerebro-spinal fluids and the pathology of tabetic atrophy, and if these are accepted, we have possibly a better understanding of the modes of approach. Weed[33] has shown that colored solutions could be forced into the sheaths of the cranial nerves only by using continued pressure for over three hours. Such a process seems impractical clinically. Schoenberg[34] not using such pressure, found that solutions seldom reached above the posterior cerebral fossa and never stained the optic nerves. Ayer[35] applying this fact, therapeutically injected salvarsanized serum intraspinally, followed by saline under pressure of 400-600 mm. of water for one hour. He reported

four cases of optic atrophy held stationary for three months.

Behr[36] drained the spinal fluid at intervals during intravenous salvarsan treatment, believing that this would increase the amount of drug reaching the nervous system from the blood stream. He reports one early case with a marked diminution in dark adaptation in which this returned to normal and remained so with good central vision for three years. Gifford reports one case stationary for three months and in three others progressive blindness ensued. Dercum has used spinal drainage extensively in America and claims good results in various types of neuro-syphilis, but Stokes and Osborne[37] after a careful comparison of results of different methods in their patients found spinal drainage to have little or no advantage over general treatment; while intraspinal treatment showed distinct advantages. The question is still an open one amongst neurologists. Marinesco[38] still claims good results, while Sicard who in 1899 was first to use mercury in spinal route, has abandoned the method believing it in some cases to be dangerous and has no advantage over general treatment. There can be no doubt as Sicard[39] first suggested and Mehrtens[40] and MacArthur have recently proved, that the effect of intraspinal treatment is not due solely to the amount of drug administered which reaches the nervous tissues, but partly to the irritant effect of both serum and drugs which increase the permeability of the meninges to drugs already present in the blood.

Goebel[41] attempted to produce a concentration of the drug in the region of the nerve by applying intermittent suction to the globe. Beriel[42] injected mercury directly around the nerve with a long needle. Lowenstein produces a general reaction by actual inoculation with malarial parasites, followed by salvarsan. None of these observers has reported a series of cases followed for sufficient length of time to determine the value of their method.

In 1916 Schoenberg succeeded in staining the cranial nerves of animals intensely by injections into the lateral ventricles. Wegeforth[43] had shown that injections into the basal cysterna have this effect and that if the aqueous is removed at the same time the dye even penetrates between the nerve bundles of the papilla and reaches the retina. Schoenberg has reported five cases of optic atrophy in which salvarsanized serum was given intra-ventricularly and favorable results were obtained in early cases.

The senior author in 1917, bearing in mind that topical application at site of pathology resulting in a local irritation, was very essential, and also that mercury was more deleterious to syphilitic invasions, proceeded to use bichloride of mercury injections into the lateral ventricle as a method of therapy. It has been clinically substantiated by numerous cases Hall,[44] Hamill, Basso and others that repeated injections can be made into subarachnoid spaces without entailing any untoward effects, provided injections are made skillfully and with good judgment. Hammond,[45] Sharpe and Hamill, neurologists, have reported some successes. Hamill used 100 mg. of neosalvarsan divided between the two lateral ventricles and points out that these large doses are well tolerated in the cranial cavity, whereas only 2-3 mg. can safely be given intraspinally. Marinesco emphasizes the same fact and uses up to 160 mg. intracranially. Sicard, LaPointe and Marie have used this method with varying success, Sicard having abandoned it in favor of general treatment. Gifford and Keegan[46] have reported several favorable results with the use of bichloride of mercury intracysternally. Air injection in subarachnoid space by Fazakas and Lowenstein[47] have given some favorable results. Evidently a marked meningeal irritation is set up by the injection which may probably be considered as a more important question in therapeutic effect than the actual spirochetal effect of the drug, since it increases the permeability of the meninges to drugs and antibodies in the blood stream and causes a local hyperemia which may improve the nutrition of the nerves.

That the intraventricular route is a radical procedure cannot be denied, but does not inevitable blindness justify heroic measures even if the procedure only results in the saving of some vision or stays the ultimate blindness much beyond the usual period for complete blindness to set in?

The technic of the ventricle injection includes a consideration of the various ap-

proaches. The lateral ventricle being composed of three horns can be approached from three distinct points. One route is through the subparietal, the other through the occipito-parietal and the third through the frontal portion of the skull. Of these the latter is the simplest and is comparatively free from any dangers and is therefore the route chosen by the senior author.

Under morphine and scopolamine narcosis, a one inch linear skin incision is made over site of trephine, which is determined as follows: Mark a point in the median line on the scalp 3-3½ inches above the nasion. This point is directly over the longitudinal sinus and near the bregma, at the junction of the sagittal and coronal sutures. Then from this point select another about 1-1½ inches to the right side. This latter point is to be the centre of the trephine area, where a button of bone ½ to ¾ inches in diameter is removed. The periosteum for a little distance beyond the trephine is sacrificed, the trephine button is not replaced, so that subsequent injections can be readily made. In trephining at this point, no vital brain structures are exposed and the longitudinal sinus cannot be punctured. A sharp pointed needle with obturator (about 6-8 cms. long) is then inserted through the dura, away from any dural vessel in the following direction: Incline to an angle of about 45° to the median perpendicular plan of the sinus and backward in an angle of approximately 10-15°. Insert the needle slowly, keeping it fixed and absolutely in the direction above stated to the extent of 4½-5½ cms. Slowly withdraw the obturator and gently incline the head some to the right. If you have entered the ventricle fluid will appear and will pulsate provided the ventricular fluid is not under increased pressure. Two or three attempts can be made if first has failed, providing needle is withdrawn each time and landmarks reconsidered. Also needle may have passed through ventricle, so that careful withdrawal of needle without stilet may be successful. If all attempts have failed, it is best to repeat it another time.

From 10-40 cc. of ventricular fluid is withreinjected into the ventricle. Do not reinject drawn and one-half of this amount with the addition of the bichloride of mercury is slowly blood stained serum with the mercury, because of the trauma already sustained. During the introduction of the needle and withdrawing of fluid, it is best to watch pulse and respiration. Withdraw the needle in the same direction as inserted, and with not too much speed and apply light pressure upon dura to aid in obliterating the point of entry. Close the wound with several well placed sutures or clips so as to secure the best possible coaptation. Apply a moderate voluminous and light dressing. Remove stitches within four or five days and have head slightly elevated and feet lowered. Always select the right side of brain for entry because on this side we have the greater number of silent areas, hence little damage can be inflicted. Keep the patient in bed for at least two days after the first injection, and thirty-six hours after subsequent injections (X-Ray charts with needle in ventricle, passed around).

The cases to be reported comprise a series of 32 cases which have been carefully and accurately confirmed as tabetic optic atrophy.

Table Showing Statistics on Intracranial Therapy

Result	Good	Fair	Stationary	Lt. Perception	Blind	Deaths
Individual number of cases	1, 2, 3, 4, 5, 7, 8, 9	6, 19	15, 16, 20	11, 21	10, 12, 13, 14	17, 18
Period of observation	1 case-8 yrs. 3 cases-7 yrs. 3 cases-3 yrs. 1 case-2 yrs.	1 case-2 yrs. 1 case-4 yrs.	1 case-1 yr. 1 case-2 yrs. 1 case-4 yrs.	1 case-1 yr. 1 case-1 yr.		
Per cent	0.38	0.09	0.14	0.09	0.19	0.09
Total	8	2	3	2	4	2
Ventricle Injection	32 [11 cases (records from Cook County Hospital to be published at another date)]					
Average No. of Injections	3					
Interval of Injection	11 days					
Amount of Injection	1-50 grain of Bichloride of Mercury.					

In each instance a spinal fluid and blood Wassermann was made in addition to a Wassermann test on the first ventricular fluid obtained at time of operation. In all spinal fluids cell count and globulin tests were made. A complete physical examination was made to

substantiate the diagnosis. An accurate perimetric examination was made provided the visual acuity permitted it, and this record along with visual acuity (corrected) was taken as an index for comparison during the course of treatment. Each of these cases has had a series of four to six injections, the dose of mercury bichloride used varying from 1/100 to 1/40 grain. The interval between injections varied from ten to fourteen days. All of these cases were treated in addition with mercurial rubs and iodides, also some had salvarsan upon general principles.

CONCLUSIONS:

1. Prophylaxis is certainly desirable and ideal, but up to the present has not as yet been established. According to some statistics, tabetic optic atrophy has not been on the increase. It seems that more careful observation of the results obtained in the management of general systemic syphilis is indicated so that proper changes in management can be made in order to prevent some of the late central nervous system developments.

2. Intracranial injections of mercury bichloride have given better results than any of the other methods used. There have been several cases with definite improvement or arrest of condition with retention of useful vision for a period of several years. A negative spinal fluid Wasserman has resulted frequently.

3. The method of choice is the intraventricular injection which in a large measure is to be considered as a topical application and is a relatively safe procedure.

4. In order to accomplish the utmost benefit in the management of tabetic optic atrophy, the diagnosis must be made early; and that every syphilitic of any years standing should be critically examined with reference to tabes and paresis and that in all of these cases careful perimetric examination should be made to determine the earliest possible field infringements, then the immediate application of intracranial injections followed by systemic treatment as well.

DISCUSSION

Dr. Walter Stevenson, Quincy: I would like to ask Dr. Suker and Dr. Jacobson if they have considered the possibility of getting the same results by direct injection into the carotid. It has been reported that meningeal infection has been successfully treated that way. Also, just how do they consider the solution reached the optic nerve? Do they consider that it filters directly through the wall of the third ventricle, and thereby reaches the chiasm, or do they consider that it passes back through the aqueduct, fourth ventricle, and out through the Foramina of Magendie and Luschka thereby reaching the nerve by way of the external system.

Dr. Leo L. Mayer, Chicago: I think it is very important when a new method of treatment of these conditions is brought forth, that it should not go without some discussion. The factors of importance in a discussion of this type are so numerous that it would take all afternoon to cover them. In the first place, many cases of beginning optic atrophy due to syphilis, when treated by ordinary methods, make a certain amount of progress in the amount of optic atrophy, and then stop for some unknown reason—whether due to treatment or whether it has gone to the point of stoppage or not is a question, but they do not as a rule go on to complete blindness, and the fields will show what Dr. Suker has shown.

Another point which Dr. Stevenson has inquired about is the point where the injection is made. Anatomically and physiologically it would seem that mercury would be absorbed into the blood stream or be transferred to the spinal fluid. How it affects the optic nerve and chiasm it is difficult to say.

Dr. Charles F. Read, Chicago: I wonder if Dr. Suker has not over-emphasized the danger of removal of the ventricular fluid. Possibly his patient had an aneurysm in the wall of the ventricle. Some years ago I had four or five paretics trephined and withdrew fluid from the ventricle, 20 to 40 c.c., with a syringe on many occasions without harm. One went into an abrupt remission following the first removal of the fluid.

Did I hear correctly that all these patients showed negative Wassermanns and spinal fluid following these three or four injections? And may I inquire also if Dr. Suker has treated any cases of paresis with optic atrophy?

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ONLY A WITNESS BUT—

Visitor in country jail—What terrible crime has this man committed?

Warden—He didn't commit any crime at all. He was going down the street a few days ago and saw one man shoot another, and he is held as a material witness.

Visitor—And where is the man who committed the murder?

Warden—Oh, he's out on bail.

CHRONIC ULCERATIVE COLITIS
(Abstract)*
(Report of 174 cases)

M. H. Streicher, M.D.
Assistant Professor of Clinical Medicine University of Illinois Research and Educational Hospital. Attending Staff Grant Hospital.
CHICAGO

This work has been in progress since 1925. In 1924 Bargen made a conclusive report on the subject as to etiology and treatment of chronic ulcerative colitis. Up to date our work agrees favorably with the work of Bargen as to etiology —we differ essentially in the treatment, particularly in the component parts of the vaccine used; although Dr. Bargen reports a higher percentage of cures with vaccine they use.

Essentially the vaccine advocated by Bargen is a *univalent* vaccine, while our vaccine is a *polyvalent* vaccine.

We obtained bacteriologic cultures from the colon through the proctoscope and prepared an autogenous vaccine. This is administered in variable doses hypodermically in accordance with the severity and progress of the case. Increase in dosage is gauged mainly by the primary reaction of the first injection. The organisms most commonly encountered are the diplostreptococcus of certain strains, the B. Coli, B. lacti aerogenes, B. acidi Lactici as an individual organism or in combination with others.

Lantern slide A demonstrates the frequency of occurrence of ulcerative colitis in cases of diarrhea. I have proctoscoped over 4,000 cases of which about 2,400 cases were diarrheas. Of this group 174 were ulcerative colitis. In other words about one case out of every 14 cases of diarrhea is a case of ulcerative colitis.

The failures of these cases depend largely on prolonged duration of disease, on resistance to vaccine stimulation, the delay of removal of distant foci of infection and on the presence of hemolytic streptococci as a mixed infection in direct or subculture.

In addition to vaccine therapy we advise a high calory diet of a high vitamin content and low residue. Irrigations of colon by standard astringents and antiseptics has not been preferable in our opinion. Ileostomy and colostomy should not be performed except in acute

*Read before Section on Medicine, Illinois State Medical Society, Springfield, May 18, 1932.

hemorrhages. These hemorrhages are not a frequent occurrence.

It is my sincere wish to convey to you the impression that while our treatment does not show 100% cures it is the treatment of choice in our opinion at the present time.

In the last two years, due to many requests for vaccine from out of town physicians we have been working on a stock preparation made up according to formula based on our work with the autogenous vaccine; the stock vaccine is being prepared for us through the courtesy of an ethical biological firm and will be supplied to any physician who wishes to use it upon request at our office.

It is essential that we understand that while our results with autogenous preparations exceed our results with the stock preparation by 50%—it is second best to no treatment at all for cases that cannot avail themselves of autogenous preparations.

307 North Michigan Avenue

DISCUSSION

Dr. Richard F. Herndon, Springfield: In discussing colitis it is delightful to be limited to a definite entity of chronic colonic inflammation.

I am surprised to note the frequency of ulcerative colitis as reported by Dr. Streicher. In my experience it has been a relatively rare condition, certainly much less frequent than one in every fourteen cases of diarrhea lasting from four to six weeks. I wonder if I have been missing a great many. Some of this difference may be explained by differences in our clientele.

Observation of patients afflicted with chronic ulcerative colitis leaves certain fundamental impressions with regard to the clinical nature of the disease: 1. There is a mild type which, left to pursue a natural course terminates in recovery. 2. Certain patients with the acute form tend to recover and become free from symptoms even though ulcers persist. 3. There is a definite tendency toward recurrence. 4. The factor that seems to determine the presence or absence of diarrhea and tenesmus appears to be involvement of the submucosa with its important nerves, lymphatics and blood vessels.

It has been interesting to watch the literature on this condition and to note the great diversity of treatment. The one fundamental fact seems to be the diet that Dr. Streicher has spoken about. With the exception of himself and Dr. Bargen, most of the other men who have been studying this condition have not been using vaccines. In fact, most observers prefix their diagnosis of chronic ulcerative colitis by the term "non-specific" because there is at present no definite proof of any distinct etiological agent.

Most of the people who have written and reported upon non-specific chronic ulcerative colitis report about the same percentage of improvement and, I just wonder if, in the present state of our knowledge, the bland, high calorie, low residue diet, coupled with fresh air, rest and warmth is not the essential thing.

There are two queries I would like to make. The first is to Dr. Streicher. I wonder if there is anything more than empirical evidence for the use of vaccine? Is there any other reason for the use of a polyvalent vaccine other than the fact that improvement was noted following its use? The second is a general inquiry. Why the remarkable unanimity of results in reporting either cures or improvement in chronic conditions? Why 70 to 80 per cent? In tuberculosis, in syphilis, in arthritis, even in cancer the reports of improvement or cure are 70 to 80 per cent. Why this regular 70 to 80 per cent? Is it psychic or is it real?

Dr. M. H. Streicher, Chicago (closing): The only thing that I wish to say to Dr. Herndon about the reason for our use of the polyvalent vaccine is that we do not entirely agree on the specificity of a univalent organism as the gentlemen from the Mayo Clinic. The reason we do not agree is because the essential organisms, namely the diplostreptococci, are found in the normal stools but not in the same ratio as they do in chronic ulcerative colitis. These organisms have specific cultural characteristics and occur in variable ratios in relation to other organisms that may be present in any given case of colitis. The simple example that I often give to students in our clinic at the University of Illinois is just this: Compare the normal bacterial proportions of any stool against the stool of an ulcerative colitis just as you would compare the leukocyte count in the blood. When the leukocyte count rises from 18,000 to 20,000 we are extremely alarmed. Yet when the B. coli count rises from 20 million to 50 million or the diplostreptococci from 850,000 to 24 million we refuse to acknowledge the meaning of this rise on the same basis.

I know of very few clinics except the Mayo Clinic and our own who have actually gone to work on this and have calculated the bacteria of the stools of these cases against the normal. Dr. Herndon, we have hundreds and hundreds of these on record. As to why percentages reported run about 75 or 78 I cannot say. One thing it means is that our results are not indicative of a perfect cure. We do not mean to be perfect. I might say it is 78 because it is not 28 or 98. Bargen reports a higher percentage in his clinic.

About the difference in type of patients observed, permit me to say that it is my impression that the type of clinic one observes will make the difference. At the Mayo Clinic, where daily admissions have been from 350 to 450, Dr. Bargen observes one case of ulcerative colitis. Of course you realize that type of a clinic is selective and highly specialized. The average incidence at the Research Hospital is considerably lower, yet our admissions are about the same in number. Inasmuch as you do not have the opportunity to do clinic work in Springfield or in other smaller cities in Illinois, you undoubtedly see fewer of these cases. A certain percentage of these cases invariably end up in a large clinic.

A PLEA FOR SYSTEMATIC HEALTH EDUCATION*

J. Howard Beard, M. D.
Urbana, Illinois

Sixty years of epochal discoveries, an acquisition of knowledge greater than during the previous six millennia, and the consequent change in the social order have placed a new emphasis upon the need of the application of science to the improvement of environment, the prevention of physical defects, the avoidance of maladjustment, and the maintenance of spiritual poise.

The necessity for the greater use of preventive medicine in the promotion of health is being thrust upon the home, the school and the college with renewed imperativeness. Parents, teachers, and educators must apply it or fail to make their full contribution to the betterment of health, and to the prevention of disease. Without it they cannot give their complete cooperation to the succeeding generation in adjusting itself to a civilization ever becoming increasingly complex. They must instruct their children and youth how to live as well as how to read, to prepare for a vocation, and to appreciate cultures, past and present.

I should like to indicate briefly the need for the application of preventive medicine to certain problems which confront society and to make an earnest plea that health education be systematic and effective in order to promote personal welfare, racial vigor, and sound social progress.

The urbanization of a greater part of the population, the rise of industrialism, and the development of this machine age were made possible by preventive medicine making cities more than places where people collected to be destroyed by pestilence. The extraordinary development of rapid transportation has increased the hazard from communicable disease beyond the ability of health officials to deal with it without the prompt assistance and support of educated laymen. The application of physical, chemical, biological, and social science to the problems of the home, school, vocation, engineering, and industry, and the complexity of modern civilization make a sound knowledge of hygiene and sanitation essential for the individual to protect himself and his family, and for him to function as an intelligent citizen.

An Urgent Need. During the transition of the last six decades, a terrible price was paid in avoidable disease, suffering, and death because the public did not cooperate promptly, and gave inadequate support to immunization against smallpox, typhoid fever, and diphtheria, delayed the development of sewerage systems, failed to provide safe water supplies, was slow in insisting upon the pasteurization of milk, and permitted unnecessary overcrowding, improper housing, and insanitary environment.

The technical knowledge and methods were available to make living conditions wholesome, but the leaders of the public procrastinated because they did not appreciate the opportunity they had to contribute to the health and happiness of their people or yielded to the siren voice of tradition or to the ignoble influence of quackery, If each citizen had had adequate health education, millions of dollars would have been saved, great suffering would have been avoided, and thousands of untimely deaths would have been prevented.

The great advancement in the application of preventive medicine has been made largely in the fields of communicable disease and in the prevention of infant mortality. This progress has been largely due to the varied and intelligent use of police power by health administrators and to the initiative, persistence and sacrifice of the practitioner. It has required relatively a minimum amount of cooperation from the public. Further increase in the average expectancy of life must depend a great deal upon the willingness of the individual to use measures involving more and more the modification of his habits, and the customs of his ancestors. This is particularly true in the control of cancer, and the degenerative diseases of the heart, kidneys, and blood vessels. Unless the leaders of the community are able to recognize the necessity for the methods advocated by health authorities, will support them, and are willing to set an example in hygienic living, advancement will inevitably be difficult and slow. Until they are educated sufficiently in the elements of preventive medicine to lead in the promotion

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of health in their locality, it will be a victim of "the blind leading the blind."

Social Significance of Health Education. Approximately 35% of the men who matriculate in college have defects which would cause their rejection under the draft. Skeletal defects, defective teeth, poor vision, undeveloped musculature, incorrect posture, heart lesions, deafness, and renal disease speak pathetically but eloquently of what might have been avoided if parents had known how to promote and to protect the health of their children. The golden age for the prevention and correction of physical defects and the formation of wholesome behavior patterns is in the first five years of life, the period when the child is entirely under parental care. If parents are uninformed, their children pay for it in handicaps and less effective lives.

There is no state in the union in which delinquency, dependency, mental deficiency, and social maladjustment are not becoming problems of such magnitude as to threaten its solvency and social stability. This situation grows rapidly worse under the increasing stress of a highly artificial existence. The sources of defectiveness are in heredity, environment, or both, and their eradication is possible only by the concerted action of competent hygienists and intelligent citizens, — citizens who have a sound knowledge which will cause them to seek expert advice and to act effectively in the interest of human welfare. Let us never forget, a specialist without cooperation of the public is as futile as a general without an army.

There are few professions whose pursuit does not involve conditions influencing health which are usually so important as to be decisive in determining the financial and ultimate success of those engaged in them. A knowledge of hygiene is as essential in vocation as oil for machinery. Pneumonia at the Rand, yellow fever at Panama, hookworm anemia in the South, lead in two-hundred trades, the menace of dust in industry, and the blight of malaria to agriculture in the lower Mississippi Valley are typical examples of the inability of workers to escape the disastrous consequences of the lack of sanitation in occupation.

The Misfortune of Misinformation. By press and by radio the public is being urged, in the name of health, to purchase everything from bran wafers to motor cars. A citizen caught in this maelstrom of advertisement without a knowledge of the fundamentals of preventive medicine is as confused as the banker who paid handsomely to have special glass in his solarium when fifteen minutes out of doors in the fresh air and sunlight were as beneficial as fifteen hours in his over-heated sun-parlor.

Each year in Illinois there are approximately 8,000 cases of diphtheria and 750 deaths, and more smallpox than in Italy, France, Germany, Japan, and New York State combined. The reason for this is that in many communities certain influential persons, often college-trained men and women, oppose so well established methods of prevention as vaccination and immunization against diphtheria. They not only jeopardize their own health and that of their families, but by their attitude and example condemn children of their neighbors to unnecessary illness, crippling, and death. Is it possible for education to meet its obligation to society until it has made a systematic effort to insure itself against such disastrous failures?

In a democracy, the revolutionary scientific discoveries of the last three-quarters of a century, cannot be applied to the improvement of public health without the consent of political units. Obviously, if the leaders of the public do not appreciate the possibilities of science to promote human welfare and are unsympathetic with its application to living, research is in vain, lifting the common level of life is a phantom, and progress is a realization for the distant future.

A Plea for Improvement. Our plea today is for sane, scientific, suitable, systematic, health education in the primary grades, in the secondary schools, and in institutions of higher learning to create and motivate a health consciousness which will prove a means for the development of physical and mental efficiency, the creation of a wholesome attitude of mind, and for the cultivation of moral and social qualities. We are advocating an instruction which shall be a decisive factor in determining that healthfulness of environment shall be commensurate with sanitary knowledge. We contend the demand of the hour is for knowledge essential to intelligent participation in

enterprises of civic betterment, and to the assumption of the duty of a well informed citizen. We believe the imperative need is an understanding of hygiene to protect against disease, to guarantee the individual shall function effectively for society for the longest period possible, and to insure the public against the tremendous economic loss and injury to health from fads, frauds, cults, and quackery. We would recommend the methodical dissemination of information having a far-reaching influence on vocational success and on the promotion of the welfare of those engaging in earning a livelihood. In systematic health education, we are urging the use of the best, cheapest, easiest, and quickest method to bring to the public the benefits to be derived from the enormous sums being spent by philanthropists and federal, state, and municipal governments for research.

A nation may create a machine age, excel in labor saving devices, be blighted by unemployment, but ultimately recover. It may establish a record for divorce, embezzlement, and homicide which astounds the world, yet maintain its stability. It may enter a jazz era, emerge with a different moral and religious outlook, and still see a better day. If children capable of being strong, well-balanced men and women are being trained to meet the problems of tomorrow, its future is assured. But if the quality of the life of its citizens is undermined by ignorance, propaganda, bally-hoo, selfishness, and artificiality, neither sky-scrapers, nor cinemas, nor radios, nor armies, nor navies, nor philanthropy, nor culture can save it from the oblivion of Rome, the decline of Greece, or the decay of Egypt.

God forbid that our generation shall be practical men who practice the fatal errors of our forefathers. The race now is between education and catastrophe, with the odds in favor of disaster,—not today, nor tomorrow, but ultimately because sanity, science, and religion seem unable to out-distance fad, folly, fraud, and brutality. We are a people overwhelmed by advertisement, stupefied by bally-hoo, intoxicated by propaganda, and gullible in matters of health beyond the fondest dream of Barnum. I would remind the doubting, incurable optimist who believes every tornado is a pleasant zephyr, that the world continues, but civilizations fall. I would say to him, no great cultures have ever grown old when permeated by disease, divorce, dependency, and crime.

Again, our plea is for systematic health education which, when motivated, will provide the leaders of tomorrow with the wholesome environment, physical vigor, mental alertness, and spiritual poise essential to insure that the republic established in the heart of North America shall endure.

Discussion

Dr. Isaac D. Rawlings, Chief, Bureau of Communicable Diseases, Chicago Board of Health: Dr. Beard's excellent paper covers such a broad territory that it is impossible to do it justice in the few minutes I have for discussion. Therefore, I wish to touch only on that portion which reads as follows: "Approximately 35 per cent. of the men who matriculate in college have defects which would cause their rejection under the draft."

In Chicago, since 1911, a sizable number of physical examinations have been made each year of children in the kindergarten and first grade chiefly, also of special cases referred by the principal or teacher, and of those pupils entering the upper grades who had not previously had a physical examination. By this plan, the aim was to give each school child a physical examination and, if possible, get correction of defects found that needed attention.

You may be interested in the following summary for the past 10 years:

Total physical examinations	1,342,727
Number of pupils with defects	1,110,482
Per cent. with defects	83%
Total pupils whose defects needed correction	924,231
The defects found in the 1,342,727 pupils totalled	3,245,348

An efficient school inspection service covering the inspection for contagious diseases; the preventive work, such as vaccination against smallpox, the immunization against diphthera and the routine inspection of rooms in which a contagious disease has occurred; and the physical examination and correction of defects are all measures which help educate the pupils, the parents and the public, and make for a better class of citizens physically, and many of them also become public-health minded.

Many points in Illinois can never hope for even this much of public health activity until Illinois does provide for county health units.

Three weeks ago I visited my boyhood home at Emporia, Kansas, where the county unit for that county (Lyon county) was sold by Dr. Thomas Parran to that community nine years ago, and they have kept the same live, up-to-date county health officer ever since.

You would think I was exaggerating greatly if I told you of the vast public health improvement in the cities and rural area of that county under the efficient county health unit plan.

THE VALUE OF HEALTH EDUCATION AS SEEN BY THE LAYMAN*

MILDRED DURKEE LANCASTER
NORMAL, ILL.

In order that my point of view may not be mistaken I should like to identify myself as a layman. I am a housewife, a homemaker, an ex-elementary school teacher, university trained in foods and nutrition with the accompanying study of chemistry and physiology. I have had some contact with public health work and am at present the county chairman of Health and Sanitation of McLean County Home Bureau. With this background stated I venture to speak of Health Education and its Value.

We are told Education is the sum total of those experiences which modify conduct; its aims include worthy home and community membership; and that this end is reached by response to selected stimuli. With health education as with all education someone must recognize the aim, supply the selected stimuli, and furnish the materials and methods of reaching the goal.

The public is beginning to develop a health consciousness. We as laymen are beginning to recognize a difference between *negative* and *positive* health. Furthermore we recognize a distinction between individual and community health problems.

Unfortunately our medical profession has been too busy building its own clientele, earning its own bread and butter, caring for its own several patients, passing the layman by with only momentary directions and advice unless very sick, to supply any of the "selected stimuli" or in other words to teach the public the meaning of *positive* rather than *negative* health. This is not a condemnation of the "medical profession." The speaker has grown up with a general practitioner in the immediate family and has an appreciation from the "inside" as well as the "outside" of the big community-burden borne and borne well by the conscientious, faithful, well trained doctor.

But how tragic that the interest of the homemaker in positive health should be aroused through a home made childless because of the lax enforcement of the quarantine law or the absence of a trained school-nurse one of whose duties it is to detect cases of communicable disease in its early stages and exclude them from school. All too frequently such a tragedy is the basis of our interest.

Even though our local health officers are minor political appointees our quarantine laws are fairly well observed as health reports show. This is good as far as it goes. But the price of the childless home is too great to serve as a selected stimulus. The person handicapped in physical stamina through life because he "had all the child diseases" is another. Either is too expensive to use to arouse to making use of scientific knowledge and methods of immunization now recognized and available.

All education comes slowly and with a cost. We who have been aroused are facing with you doctors, nurses and health officers the question of furnishing the selected stimuli for the others. Can the human desire to make our bodies carry us and our children as far as we are physically and mentally capable of going turn the attention of the public to this problem of health? Or is the taxpayer who is "money conscious" going to become "health conscious" because he recognizes the law of individual differences. This law of individual differences interprets the spread of our intelligence all the way from idiot to genius with about 50 per cent of us half way between and with physical fitness bearing a close relationship to mental capabilities. The value of health education can not be talked alone in terms of the individual, it is a community economic problem.

The school nurse who is doing even so limited a job as our school nurse in McLean County is doing a fine constructive thing. Our nurse is on duty 9 to 10 months depending on the amount of money available, and her wages are small. She visits at least once a year the 7090 elementary school children in the 230 rural schools outside of Normal and Bloomington. She weighs the children and gives the usual inspection of ears, nose, throat, etc. Last year she found 1945 pupils, an average of 11.6%, underweight. The results of this examination is recorded on a record card which eventually is sent to the County Superintendent's office. The child having dental defects taken care of by the family dentist is given a button in recog-

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nition, the health poster sent out by our state health department is colored and competes for the prize, the busy schoolteacher cooperates as she can. This is all fine but not enough.

The nurse is overburdened, underpaid. The school teacher? Anyone familiar with her work knows her job has come through the last years to include doing everything no one else has time to do instead of the emphasis in school work being placed on that which the school alone can best do. Every school teacher should have a positive health consciousness and some hygiene knowledge; so should every lawyer and every farmer. But we must not expect unusual capabilities in health education unless that is the teacher's specialty. As yet the economic status of teachers is such their training must include those things which best serve to earn their bread and butter while they teach the fundamentals of life. Health education isn't considered a fundamental yet though any teacher knows the basic principles of heating, lighting, ventilation and sanitation. But with forty active minds to direct she finds no time, were there skill, to give to checking up on whether Johnny's tonsils are enlarged, or Mary's teeth decaying.

Hot school lunches supervised in nearly all rural schools today and the study of foods and nutrition by hundreds of women—1247 in McLean County—under the direction of trained Home Bureau advisers are a factor in the health education for correcting underweight.

But the taxpayer is still wasting his money when a child goes to school physically unfit to "carry home" what is offered him there, or when he, an adult, muffs a business deal because he was "so tired," or enters a sanatorium because his body is unfit.

For a goodly number of years the Parent Teachers Association has been instrumental in conducting pre-school circles and pre-school clinics. In the latter a complete general physical examination is given each child who will enter school the following September. In the Fall a second examination is held to check the number of corrections made. The Home Bureau has cooperated in this work and in my home county is making a survey of the rural districts with the avowed objective of encouraging the complete examination by the family physicians and dentists of every child between one and six years of age. There is no wild hope of 100% results but there is a hope of arousing the public to the value of complete examinations of children and possibly adults and later to the worth of immunization. Complete adult examinations have been encouraged a long time but the per cent of return from adult education is low. However there should be direct results show up from the two-year program of health lessons being given in our county to the 527 4-H club girls, 10 to 20 years of age inclusive.

The taxpayer should convince himself and his family physician it is better to have a complete examination periodically as he does his dental examination even though he feels well rather than wait until illness or "that tired feeling" forecasts a bank account devastating illness or a tax supported rest in a county sanatorium. In connection with the last circumstance a well developed and enforced health and sanitary education could well save much money that is now used in rehabilitation. State law provides the means of caring for the examination and treatment of tubercular suspects, contacts and cases if the taxpayer will just realize money spent in prevention may well save a greater amount to be used in cure. That is if the money be efficiently and intelligently expended.

Considerable has been said concerning a health consciousness which insists on complete physical examinations, corrections, immunization, and quarantine. A phase equally as important and basic to all this is the dissemination of the knowledge of prenatal care of mothers and the post natal care of mothers and babies including the encouragement of breast feeding. Some work is being done through the Home Care classes of recognized home economics courses and through Parent Education and Child Development classes conducted through the Home Bureau but beside these outside the big crowded centers of population there seems that little is being accomplished or even attempted. This education well done may save much of the need of the latter work mentioned before but it must reach fathers as well as mothers.

It is truly a sad circumstance for an intel-

ligent young woman to take up a homemaker's job of rearing a family and not know the dietary needs of her child. There is much authoritative literature on the subject but someone whom she trusts should place it in her hands. Sometimes it is difficult to distinguish propaganda from guidance. Some communities lack the directing genius in this field. We all need nutrition facts.

Sanitation problems of the community must be considered in the development of a community health consciousness. All health examinations, corrections and habits may go for naught if the well water is bad. The state sanitary department is ready to send us explicit directions on how to build our wells so that we may have safe well water, and to test the water from the well and if it be satisfactory on chemical analysis personally examine the well and place a state safe water seal. However McLean County has only 42 seals outside Normal and Bloomington, 13 on rural school wells. In one township a family became a community problem because of typhoid. One resident of the township said, "Maybe we can get somewhere with our well inspection now!" Why must tragedies afford the stimuli?

Given good physique, periodical physical and dental examinations and corrections, adequate nutrition and sanitary living conditions we still may lack positive health. Health habits of rest and sleep, fresh air and sunshine, exercise and work, play and recreation, mental stimulus and poise must take an active part in the life of the health educated person.

The struggle of the individual to produce a livelihood occupies a small and decreasing fraction of his time and energy. This permits and perhaps necessitates a changed viewpoint in regard to the elements of living. In this new veiwpoint constructive, positive health education becomes more and more important. That necessitates a change or modification of the view of the professional man including the doctor.

To this layman it seems, modern medical practices, new knowledge from the laboratories, thoroughly trained specialists and practitioners can afford the materials and technique of adequate health education. A demand for this education is beginning to be evidenced by the public. This demand will grow if the "selected stimuli" are supplied. There are enough organizations interested in the problem. The state is anxious to foster and encourage. It is up to those most thoroughly health conscious to lead the others to a health education commensurate with worthy home and community membership, in a word to select and supply the stimuli.

THE EFFECTIVENESS OF PUBLIC HEALTH EDUCATION FROM THE GENERAL PHYSICIAN'S POINT OF VIEW*

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In my discussion of the effectiveness of Public Health education from the practitioner's point of view, I will give an expression of opinion concerning the topic rather than a presentation of facts. The general physician does not keep the type of office records that will be of value in comparing the amount of preventive medicine practiced now and say ten or twenty years ago.

As I look back I can see much progress in the education of the physician and the layman. A few outstanding advances come to mind. Now people so universally know about balanced diets and the value of the vitamines that it is unusual to see deficiency diseases even in dispensary patients. The broadcasting of the value of breast feeding to infants has resulted in saving many babies from illness and death. Mothers are now better informed about diets for young children and know the value of orange juice and cod liver oil. The value of sun baths is so generally known that stores are supplying sun suits for children.

Women are now coming to us earlier in pregnancy and expect prenatal care. I believe the average physician is giving prenatal care. We periodically check the blood pressure and urine so that we will be informed of the approach of eclampsia. The early diagnosis of syphilis in the mother has allowed us to give prenatal treatment with a consequent prevention of a severe infection in the baby. Preventive medicine is modifying our care of the woman while in labor. Because of the danger of carrying

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infection into the birth canal we no longer do vaginal examinations unless forced to and then only under aseptic conditions.

During recent years allergy, a condition that has made the lives of millions of people wretched, is responding to preventive methods. We can now tell people, with a great deal of confidence, that we can prevent hay fever and asthma. Hives, migraine, colon disturbances and certain types of eczema are prevented in many instances by the elimination of the offending substances from the food or surroundings.

In another field we find that the examination of the milk herds for tuberculosis and the destruction of infected animals has played a large part in the marked decline of bone and gland tuberculosis. Pasteurization of milk and proper refrigeration of food has been a big factor in causing the constant decline in the infant death rate.

Because of health education, people are beginning to realize the importance of early treatment in disease. Formerly effective treatment was often hopeless because of the advanced stage of the disease. Now we are frequently called so early in an illness that diagnosis is difficult. Another indication of health education is the increase in the number of people who appear for periodical health examinations.

We have made progress in the field of immunization. Last year the Illinois Department of Public Health had records of 194,972 children receiving diphtheria immunization. Ten years ago there were very few such immunizations. Last year there are records of 87,150 smallpox vaccinations. Ten years ago, not nearly so many.

It seems reasonable that the effectiveness of Public Health education could be measured somewhat by the mortality rates of diseases that can be influenced by preventive medicine. Typhoid fever, smallpox, diphtheria and scarlet fever probably could be made to cause little or no mortality by universal immunization. Their combined mortality rates of 1930 were only 45% of that in 1920. The rates for various years vary but the trend is downward and represents real progress. The diarrheal diseases of children, that are prevalent where there is poor sanitation and hygiene, have had a steadily declining rate, the 1930 rate being only 30% of the 1920 rate. Infant death rates have steadily decreased, the 1930 rate being 63% of that in 1920. Here prenatal care, better obstetrics and better infant feeding have gradually and progressively improved a formerly bad situation. Preventive medicine and better medical care have helped force the puerperal state rate of 1930 to 65% of the 1920 rate and the tuberculosis rate of 1930 62% of the 1920 rate. In studying mortality rates one must keep in mind the fact that many factors influence them. The activities of the family doctor have been largely responsible for the progress we have noted. During the rush of practice I don't believe the average doctor realizes how important an agent he is in the prevention of disease.

There are several fields of preventive medicine that still challenge us. Venereal disease incidence remains much too high. The number of rabid animals is increasing in the state and we should take some definite preventive action. Trachoma and gonorrheal ophthalmitis still cause blindness. Arthritis now causes as much disability and suffering as most any other disease and several states have already accepted this disease as one of their Public Health problems. Mental disease or inadequacy fills 50% of the hospital beds of the country yet we are apparently only recently realizing that mental hygiene might prevent some of this terrible loss of happiness and usefulness. A large part of general practice deals with treating emotionally and mentally disturbed individuals and we should realize the need for prevention.

There are four outstanding reasons why Public Health education and its program will never be 100% effective. First, there are people who can not be educated along health lines. There are in this state thousands of Christian Scientists and antivaccinationists, thousands of mentally deficient and still other thousands that have as their medical advisers chiropractors, osteopaths, naprapaths and so on. How can we get a health program across to them?

The second obstacle to Public Health effectiveness is the lack of information by the medical profession as a whole and their lack of application of the facts they do know. Clifford Grulee in speaking of the pediatric health problems before the health officers conference here last fall said, in part, "We must first know about ourselves if we are to be of any value in helping others. Therefore, a rather thorough

survey of the physicians themselves and of their education was made. It became very evident from these statistics, as many of us had previously suspected, that the medical school in this country is not fulfilling its duty to the public in respect to the education of doctors who practice among children. Whatever may be the cause for this, the fact is still very evident. Medical schools in the past have had no appreciation of preventive medicine when it demands individual attention.'' The diagnosis and treatment of disease is stressed in the medical school and it is perfectly natural that the physician stresses this part of his work. Treating disease is also attractive to the physician because the patient usually gets well or better. Preventive medicine does not usually have such an easily seen result. Only the laborious compiling of statistics proves the great value of the work that has been done, probably years before. Because of this greater interest in problems of diagnosis and treatment, I believe that relatively few general practitioners meet with this section and I would suggest that men interested in Public Health have some place on the programs of the medical and surgical sections.

Another important factor that retards Public Health advance is the lack of information of the layman and his apparent lack of interest when he is informed. Dr. Kegel has told this section in former years how he met with apparent lack of interest in his Chicago Campaign for diphtheria immunization. It required the personal contacting of the parents by the Public Health nurses to make the drive a relative success. Gieb and Vaughn in Detroit had a similar experience in their diphtheria immunization campaign. After an extensive educational program and with a well organized medical society cooperating, they had contacted only 18 to 20% of the children in need of protection. An extensive check and recheck of the families by the Public Health nurses finally raised the results of the drive to 70% of the preschool children and 80% of the school children receiving immunization. It seems that something more than the presentation of the facts is necessary to make people realize the advisability of protecting themselves.

In discussing the lack of layman cooperation we must remember that the low economic status of a large number of people causes them to put off preventive measures that they consider they cannot afford. In 1926, a comparatively prosperous year, 67% of the families of the U. S. had an income under $1425 a year. On such a budget there was only money enough for necessities and health protection has not been established in the general public's mind as a necessity. At this point I would like to review with you some of the facts brought to light by The Committee on the Costs of Medical Care. I will quote in part from an article by Michael Davis in a recent *New England Medical Journal*. He says, ''The expenditure for organized preventive measures is deplorably low, less than 100 millions or only one dollar for prevention to nearly thirty-five spent for cure. The total of suffering and of expenditure due to disease could be substantially reduced if more adequate sums were put in preventive work. Drugs, medicines and appliances constitute between 20 and 25% of the total, and about half a billion of this goes for worthless or harmful materials. The amount expended for physicians comes to less than 30% of the total.'' A strange situation becomes apparent. We as a nation can throw away 500 million for useless materials yet can see the need for only 100 million to prevent illness and suffering. There is a tendency in Public Health work to lock the stable after the horse is stolen. Epidemics or high mortality rates seem to be necessary to make people appreciate the preventive need.

In considering the obstacles to effective preventive medicine we must not forget the ever present thorns in our sides—the quacks. They have spread their falsehoods for centuries and apparently will continue merrily on. They make no contribution to the welfare of society yet apparently make a financial success of their business.

Let us turn to the future. What can we do to better advance the philosophy of 'stay well'? I have several suggestions to present for your discussion. From the general physician's standpoint they seem practical. First, we should have active federal, state and county or community health departments working in close cooperation. Figuratively they should represent the activity stations from which radiate the preventive medicine and Public Health programs. In my opinion the federal and state depart-

ments are doing a good job. There is room for much improvement in the county and community organizations. I am told there are about 2,700 health officers in Illinois and only about 200 of these are physicians. From this state there are only 58 names listed in the U. S. Directory of Public Health Officers and this small group represents the only active men as far as Public Health educational work is concerned. How are these so-called 'health officers' selected? Their availability is in most instances determined by their political affiliations and not by educational qualifications. In a recent article, Stanley Osborn of the Connecticut Health Department said, "At the present time it is only the rare physician who can step into the position of health officer without special training, for Public Health is truly a specialty just as is any other branch of medicine." Later in the paper he states, "It is rather the rule that physicians of a community will cooperate with a trained medical health officer better than with an untrained physician who may try to take up the reins of Public Health with no qualifications." A recent survey in New York state has caused the recommendation of a full time, specially trained health officer for communities of over 50,000 population, yet in Illinois we see communities of over 70,000 where a busy practicing physician is also the health officer.

The effectiveness of the Public Health program could be increased a great deal by extending education along these lines to the children now in high school and the upper grades. Dr. J. Howard Beard of Urbana brought this suggestion before this section five years ago and has been actively advocating it since. It seems reasonable to me that some knowledge of the methods of keeping well might be as important to the future welfare and happiness of the individual as appreciation of literature, for instance. The individual should be taught his part in the general health program of the community. He does not usually get such instruction at home. A discussion of the possibilities of disease control and prevention as part of the school program would cause a more intelligent understanding of Public Health activities.

I believe that the doctor should give up his long silence and fearlessly tell the world that he has some facts. We have allowed patent medicines, patented foods, various appliances, quacks and cults to prey upon the people and spread false information with but feeble resistance from us. A united profession could stop much of this untruthful advertising. A well organized and active propaganda committee in each county society could give the people of the community some real factual education and, I believe, could effectively combat the misinformation that is now being spread. The Knox County Medical Society in Tennessee is doing work along this line. They apparently have the hearty cooperation of the radio, newspapers and the various women's groups. This state society has a very active educational committee and the county societies could well use it as a medium of starting such community campaigns.

If we plan to extend our education of the laity we must be sure that the physicians they consult about health problems are interested. "Education of the laity requires that physicians be able to answer and participate in a discussion of their questions." Frequent county medical society clinic days and joint county society meetings give physicians an opportunity of learning new methods and ideas with the spending of but little time from their work. I believe that traveling clinics could be made of a great deal of value to the general physician. Dr. Bishop of Tennessee reported to this section in 1928 on the traveling tuberculosis clinic in that state. They have been able to show physicians and laymen the high incidence of that disease and its Public Health aspects.

The entire Public Health program of education and prevention needs the cooperation of the family physician. He can and should be induced to assume the major responsibility of the program. Donald Armstrong has aptly said, "There should exist in every community the facilities for individual medical and health guidance. General broadcasts by radio, through literature, the press, advertisements, and all the wholesale devices available, will not serve to answer intimate personal questions on health and on disease prevention. The private physician should eventually fit in here most effectively."

The community of Oak Park has interested the physicians in health programs by having an active rotating medical Public Health ad-

visory board. After a period of years very nearly every physician there has had an opportunity to see health needs and to take an active part in the programs these needs develop. Participation in a work is the surest way of developing a general physician into an active Public Health worker. It is also the surest and easiest way to educate him in the latest technique, because he will make an effort to keep himself informed.

In 1928 the Health Department of Detroit inaugurated what appears to me to be an ideal relationship of the physician to the community health program. There were then about 1,100 physicians in that city and 90% of them were enrolled in a diphtheria prevention campaign. This enrollment took place largely through the efforts of the Public Health committee of the medical society. The physicians were contacted, the technique and procedures outlined, a standard fee set and provision made for compensating the doctor for his services to patients he considered unable to pay. After the medical profession was all set, the public health officers and nurses carried on an intensive layman educational campaign and finally personally contacted parents who had children in need of protection. These children were all cared for by practicing physicians and several benefits are apparent. First, the campaign was effective in that 80% of school children and 70% of preschool children were protected. Second, the way has been paved for enlisting these physicians in other Public Health activities. And probably most important, the community has found for the first time that a majority of the physicians are interested and active in preventive work. The layman cannot help but feel that if 90% of the profession thinks immunization is advisable there must be something to it. This same united interest can and should be carried into other fields of Public Health activity with an ever increasing effectiveness.

TO THE NTH DEGREE

New Hospital Patient—Say, doctor, I asked that nurse to put a hot water bottle at my feet and she stuck up her nose and walked away.

Doctor—What else could you expect? That was the head nurse?

Patient—Oh, do they specialize that much? Then get me the foot nurse.—Capper's Weekly.

HEALTH EDUCATION FROM THE VIEWPOINT OF THE SCHOOL OFFICIALS*

PROF. J. B. McMANUS
LA SALLE, ILL.

A few generations ago schools did not concern themselves with the health of the pupils. That was a matter which was left solely to the parents until the prevalence of a disease had reached the proportion of an epidemic. Then the community assumed control and discharged the duties pertaining to health indifferently well. During the last twenty years the schools' responsibility has undergone a decided change. Schools are now doing everything, within reason, which their finances will permit, to safeguard the life and health of the pupils. They are now trying to turn out healthy, happy children, well started on the path of successful adaptation to their environment and to the rules of civilized life. Education, in its broader sense includes instruction as to proper diet, proper conduct, proper use of one's mind, body and emotions to the end that a healthy body, a healthy mind and healthy morals will be adequately built up and maintained.

The schools are interested in the physical well being of the children from the stand point of efficiency and attendance. The advent of the public health movement in education has greatly reduced the number of absentees and the efficiency record of those in attendance has been greatly enhanced. The annual scourge of contagious diseases is now practically eliminated. The close cooperation of the teachers and school officials with the Health department enables the physician and nurses to detect the contagious disease in its incipiency, thereby enabling them to isolate such children and prevent the spread of the germ. The examination of pre-school children by physicians to detect correctable defects now throws some of the burden on the parents, to see that those defects are corrected before the child enters school.

While a complete plan of Health Education resolves itself into three distinct, but closely related phases; health service, physical training and recreation, it is with the first of these that we are particularly concerned today. A Department of Health is necessary to stimulate

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health activities and to speak authoritatively, through its physician, on matters pertaining to the health of the community and especially that of the children. It should and does plan a program of health, formulates rules of right living, and constructs a workable syllabus for the inspiration and guidance of the teachers. However, the superintendent and teachers must help to put it into effect. It is the class room teacher, co-operating with the parents who does the actual effective work in health education. A knowledge of virtues does not insure their practice; neither does a knowledge of health habits or rules insure their observance. Teachers must do everything in their power to induce the pupils to practice the rules of right living and to thoroughly master those health habits which are designed to protect their health and prolong their lives.

Prevention is the most effective health work that can be done for the welfare of the community. It is really a composite problem of the home, the school, and the community and must be solved through their co-operation. They must make use of what science has found out for the prevention of sickness and the spread of disease, and do every thing possible to get the children and parents in the right attitude toward health education. When fully awake to the dangers of infection, parents and pupils will work, with teachers and physicians, in an effort to ward off disease. Teachers must work with the Health Department to get the idea across to the parents and children, that certain diseases are caused by germs, which may, by precaution, be prevented from getting into the system. In the course of a few years nature will build up in the body, a certain amount of immunity, which will prevent or impair the growth of disease germs. The children will be stronger and healthier and will not have experienced the dangers and sufferings consequent to attacks of measles, diphtheria, whooping cough, etc.

Before teachers can do very effective work in health education, they should have a knowledge of what science has to offer for the development and maintenance of health. They should know the rules of health and have formed the habit of right living. Teachers' Colleges should make health education a major subject, and then give to every prospective teacher a workable knowledge of such health rules and health habits as should be taught to pupils in the elementary schools. In the meantime, through the influence and efficient work of Health Departments, teachers may and are being taught to realize the importance of health education and induced to master much of the knowledge pertaining thereto. They are becoming better acquainted with correct habits of living and instinctively help their pupils to set up and observe such habits.

Until our teaching force has more completely mastered the necessary scientific information for health education; until they practice rules of health habitually, and until instruction in health education can be done instinctively, a special period on the program must be set aside for instruction and drill on health education. I do not mean to infer that the time will ever come when incidental instruction on health will suffice, but I do mean to say that we can never do effective health work in any one recitation period a day scheme. Much of the health instruction should be incidental and spread over the entire day. Now, the teacher must see that the pupils get the necessary correct information during that period, either from the text or through a series of talks. The teacher must see to it that proper health habits are firmly established by appropriate practices. To do this she will have to secure, so far as possible, the good will of the pupils and the cooperation of the parents.

Teachers need never be so busy that they cannot spare the time to inspect the hands, the faces and eyes of the pupils for cleanliness and for signs of a communicable disease. By giving close attention to all common colds and coughs, teachers are able to detect the sign before the cold is actually developed. By regarding every cold as a possible beginning of a contagious disease, some children are required to remain at home a few days, thus insuring a speedy recovery and preventing the possible development and spread of disease germs. Experience has taught us that children having severe colds or coughs can do very little effective work in school. But if such children remain home a few days, a complete recovery will be effected and the child will be just as far advanced, in

his school work, at the end of the week, as if he had remained in school every day, hampered with the prolonged cough or cold.

A child's conduct, character and mental attitude are acquired very largely from the environment in which he lives. To bring about the necessary change in attitude and mode of living, the teacher must not only be sure of her facts, be concise in her statements, but she must be very tactful so as not to reflect discredit on the parents and the home life of the children. It is more what a teacher is, than what she says. She should exemplify health in her daily work thus encouraging the pupils to attain the good health standard which she has set. Teachers should cultivate an observing attitude, that they may be able to promptly detect or recognize bad heating, ventilating and lighting conditions and regulate them. All this instruction, proper living examples and abundant practice in health habits should develop in the pupils sane, wholesome attitudes toward life and health.

According to Prof. Judd, "Nutrition, in the highly artificial surroundings of civilized life, is not something that can be left to the unrestrained native impulses of childhood." Those impulses or appetites must be curbed and directed either by the better informed and more experienced members of the family or by the teachers. Many of the parents are poorly informed on such matters. Even some educated, well meaning parents have very erroneous ideas as to what their children should eat, as to what they should wear, and also the amount of sleep and rest necessary for healthy growth and development. While we cannot hope to have a dietitian in every school, we are encouraged to hope that most teachers will have sufficient knowledge of the proper kind, and the several varieties of food that children should eat and have at least an elementary knowledge of how such foods should be prepared. If the teacher is tactful and gives out such information, at the right time, couched in language easily understood by the pupils, the parents will be gradually educated and influenced through their children.

The Health Department or Hygienic Institute, as it is called in La Salle, does much to stimulate and to carry into effect health education in La Salle, Peru and Oglesby. The Physician, assisted by the nurses, gives a physical examination each year, to all the pupils in the first, third and fifth grades of the public and parochial schools and also to the first year High School pupils. The school, the teachers, and the parents are becoming more familiar with the work of the Hygienic and readily assist and co-operate with the physician and nurses. Nearly 2000 pupils were examined last year in the grade schools and over 400 in the high school. Ninety four per cent of the grade pupils were found to have some defects. Approximately 75% showed some tooth decay. Efforts are being made to overcome much of the tooth decay by prescribing the proper diet. The results of this effort are not yet definitely known.

There has been a remarkable increase in the number of corrections made during the past two years. The average gain in the number of corrections listed among the grade school pupils of the tri-cities was 37%. However, some of the individual grade schools showed a percentage of correction of over 60%.

Much effective work also is being done in school today in the promotion of health by the school nurse, who goes to the homes, or perhaps deals with the pupils individually, and sets up, through intelligent advice and supervision, habits of good living. Teachers are becoming better acquainted with correct habits of living and instinctively help their pupils to set up and observe such habits. Through special arrangements made by Dr. Ailes, the nurse of the Tuberculosis Society and the Metropolitan Insurance Company, work with the nurses of the Hygienic Institute in covering the territory of the tri-cities. In this way the public and parochial schools in La Salle, Peru and Oglesby are visited practically every day by some one of the nurses.

The Hygienic Institute has launched several schemes, which stimulate great activity on the part of teachers and pupils in the correction of physical defects and in the teaching of hygiene and health habits. One is a health cabinet, made of metal and containing removable cards, which show the several defects, if any, of each child in the room. As the defects are removed or overcome the record on the card is changed to show the progress. Considerable rivalry may be and is stimulated between the children in any school room, or between pupils in the dif-

ferent schools to see which can remove the most defects, and thus improve their health records.

It is difficult to accurately measure the results of health education in any school district during a definite period of time. However, the Committee on Administrative Practice of the American Public Health Association has issued a score form for recording health records, whereby many cities and school districts evaluate their health work. The said Committee has adopted a standard for each item recorded and the school district, by checking their records under the several heads against the standard, can determine wherein it is relatively weak or strong.

Through the persistent and efficient efforts of Dr. Ailes this score form was adopted and put into effect through the Hygienic Institute in La Salle, Peru and Oglesby in 1925. Records were kept and scores were made under fourteen heads, including communicable disease control, popular health instruction, etc. According to those records, our community in 1925 showed a score of 456 points out of a possible 1000 points; while in 1930 we attained a score of 785.

Some of the school rooms in La Salle are organized into health departments, with a President and some assistants, whose duty it is to regulate, so far as possible, the temperature, ventilation, and lighting of the school room. Also to see that the pupils remove their rubbers and heavy coats or sweaters while in the school room. The following syllabus is pretty generally observed and the suggestions faithfully carried out in all the school rooms in the Tri-cities—

A SYLLABUS OF SOME IMPORTANT HEALTH RULES AND HABITS BY HYGIENIC INSTITUTE

1. Be moderate in all things. Do not over or under eat, use beverages to excess, keep late hours, or establish other dangerous or unhealthy habits.

2. Establish good, regular daily habits, especially as to eating, sleeping and bowel movements.

3. Meals should be balanced so that the daily ration contains milk, butter, meat, eggs, vegetables and fruits. There should be some coarse foods, plenty of salads and water. Plenty of time should be taken at the meal and the food should be well chewed.

4. Your homes should be heated to a temperature of 68 degrees F., to 70 degrees F. Provide for a change of air, without a direct draft, through windows and doors, in moderate temperature. Bedroom windows should be opened at night, but regulated according to outside temperature and the force and direction of the wind.

5. Keep clean. It is very important to bathe the entire body at least once a week, brush the teeth daily, and especially to wash the hands after toilet and before eating.

6. Take 8 to 12 hours of sleep every night, according to age in a cool, well ventilated room.

7. Wear loose, porous clothing, suitable in weight and warmth to the season and the weather. Better wear light clothing and be prepared with suitable outer garments to be worn as circumstances warrant.

8. Avoid needless and close contact with those suffering from a communicable disease to which you are susceptible. Avoid others when you are sick yourself. Cover the mouth or nose in coughing or sneezing. Keep fingers, pencils, etc., out of the mouth.

9. Inspect closely and report to the nurse or physician any unhealthy sign of the children's hands, face, eyes, teeth, gums, tonsils, ears and especially defects of vision and hearing.

10. Encourage every child that has not been vaccinated or immunized against smallpox, typhoid fever, diphtheria and scarlet fever to have this done.

It may be entirely too ambitious, yet I like to hope that the time may come when according to Prof. Sutton, Public Health Authorities, cooperating with the schools, shall succeed in instilling into the minds and hearts of the rising generation the idea that they are the bearers of the life and health of the race. They must be led to realize that since they are but the temporary bearers of the life stream they must guard it with the greatest care, so that they may enjoy life to the utmost and pass it on unimpaired to the next generation.

(I received many helpful suggestions from Dr. William A. Howe, Chief Medical Inspector, Albany, New York.)

CONSCIENCE UNNECESSARY

"There was a certain prominent physician who had a serious operation to perform on one of his patients," said the farmer. "During the operation the physician became rather nervous and excited, and instead of removing the membrane he was after, accidently took out the man's conscience."

Here the farmer stopped.

The lawyer inquired, "Well, what became of the patient? Did he get well?"

"Oh yes," replied the farmer, "but having his conscience taken out he was not fit for anything else, so he studied law."

THE VALUE OF PUBLIC HEALTH INSTRUCTION AND PUBLIC HEALTH WORK AS SEEN BY THE PUBLIC HEALTH OFFICIAL*

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A few years ago Great Britain sent out to India one of her promising young men to take a place in the government of that vast but backward country. He found in that land a curious mixture of poverty and potential wealth. Along the banks of the Indus River he saw thousands of fertile but barren acres. Crops had never grown there because the rainfall was insufficient.

Great possibilities took shape in this young man's mind. Along the banks of that great river vast wealth in the natural fertility of soil was going to waste. Through the very midst of that potential wealth flowed a never failing volume of water. Back in his native country was the engineering skill fully able to divert that water into the fields. Utilizing the skill of the engineer to bring the water into the barren fields was the task which alone was necessary to tap an endless source of wealth where only poverty had before prevailed.

As a result of that vision the great Sukkar Dam was opened early this year. The 6,500,000 acres of hitherto parched land will furnish profitable farms for 2,500,000 Indians. Out of that land will come annually 600,000 bales of cotton, 1,500,000 tons of wheat, 500,000 tons of rice, 120,000 tons of oil seed and 300,000 tons of native food and grains. The $120,000,000 spent in building the irrigation system made it cost just $48 each to provide a profitable homestead for 2,500,000 farmers.

Another story of an engineer interests me in a similar way. This man was on the train in Pennsylvania with the Chancellor of the University of Kansas as his travel companion. The engineer was grumbling about his inability to find a suitable place for his vacation. "Why," asked the Chancellor, "don't you go to Atlantic City?", observing that it was near at hand. "I don't want to go there. I was there last year," was the reply. "Don't you like the beach and the board walk and the hurdygurdies?", the Chancellor insisted. "I do like those things," replied the engineer, "but do you know, when I sat on those steel piers that jut out into the Atlantic, and saw the great tides come sweeping in and when I realized that every day more power goes to waste than would be required to light and heat every home on the Atlantic seaboard, it made me sick."

These two stories illustrate very well the position of the public health official in respect to the value of public health instruction and public health work. In Illinois this public health official sees a vast amount of needless wastage of human life. He sees on the other hand a never-failing source of knowledge, flowing through the channel of the medical and sanitary professions, which if applied properly would convert thousands of lives made barren by preventable sickness into rich human experiences measured in terms of both happiness and economic benefit. Every time he looks at a sheet of vital statistics he sees evidence of thousands of useful years cut off from human life, not only by communicable diseases but by such things as cancer. The thought of it makes him sick.

Like the Englishman who saw life for barren fields in the water of the Indus River the public health official in Illinois sees flowing in the channel of medical and sanitary knowledge a vitalizing force which has the power to prevent or modify typhoid fever, diphtheria, smallpox, tuberculosis, rabies, measles, scarlet fever, whooping cough, malnutrition, syphilis, gonorrhea, cancer and ill health in general. Here and there throughout the country these channels of knowledge have been tapped by laterals which have resulted in the spread of this knowledge to whole communities which have succeeded in eradicating completely some diseases and in greatly reducing the prevalence or fatal and disabling character of others. This history leads him to believe that a whole population like ours in Illinois can be irrigated with medical and sanitary knowledge sufficient to eliminate or at least reduce losses that are now heavy both in economy and human experience.

The value of public health work seems too obvious to warrant discussion. Who, for example, would wish to turn back the calendar to

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the days of yellow fever when strong men turned pale and whole communities fled in terror from their homes at the approach of that disease which paralyzed commerce and left destruction in its wake? Who, indeed, would choose to live through the gay nineties when typhoid fever killed its thousands while diphtheria and tuberculosis killed their tens of thousands? Who would go back to the days before the practice of pasteurization made milk relatively safe for city children? Who would bring back malaria and cholera which public health work has successfully combated? To ask these questions is to answer them. One after another communicable disease has been brought under control through the practice of what is generally understood as public health work and this success makes possible city life as we find it today.

Of course, public health work and preventive medicine can go forward no faster than the public demand or at least public toleration. The profits from public health work are large, similar in magnitude to the anticipated returns from the investments in the Sukkar Dam, but the activities cost money and the public must pay the bills. Public health instruction must, therefore, precede public health work.

A particularly striking example of what may be expected when the knowledge of preventive medicine becomes general enough to result in popular support of an efficient and adequate public health service on the one hand, and the practice of preventive medicine by the medical profession on the other, is the experience of New Haven, a city of 162,000 people. Some outstanding contrasts in the terminal years of the last half century are as follows:

	Deaths per 100,000 People	
	1881	1931
Diphtheria	90.0	0
Scarlet fever	13.5	0
Smallpox	2.0	0
Typhoid fever	43.2	0.6
Whooping cough	4.5	0.6
Tuberculosis	393.1	54.7
Infantile diarrhea	109.0	1.8
	655.3	57.7

Here are seven diseases which last year caused 94 deaths in New Haven. Had the 1881 rate prevailed these same seven diseases would have caused 1,062 deaths in New Haven, to say nothing of at least 10,000 cases of sickness from which the patients survived. The public health service in New Haven costs $1.02 per capita. In relation to results from preventive medicine the public health service corresponds in function to the irrigation system in relation to results obtained from cultivating the soil which is thereby watered. With this in mind you may draw your own conclusions as to the value of public health work.

New Haven was selected as an illustration because reliable records go back over a longer period and were easily available in serviceable shape. No less striking improvements have taken place in Illinois. Evanston has a health department which will compare favorably with that of any other city in its class in the United States, and the people of that municipality have been so impressed with the results of its activities that they not only refused to curtail appropriations in this year of economic distress but made possible a new undertaking. Rockford has done some remarkable public health work and maintains a splendid department of health. The City of Chicago has been able to practically eliminate a number of diseases and make life both safer and longer. Winnetka has done some very commendable work, the outstanding character of which is illustrated by the fact that whooping cough has been so managed as to prevent fatal termination of any case in recent years. For Illinois as a whole the three diseases of typhoid fever, diphtheria and tuberculosis cause nearly 25,000 fewer deaths annually than would be the case if the 1890 rates prevailed. Last year there were 27 Illinois cities of more than 10,000 population each which experienced no mortality from diphtheria and 40 cities of the same class that had no deaths from typhoid fever.

Now a glance at the other side of the picture. Four years ago Montreal experienced the worst epidemic of typhoid fever of modern times. Over 5,000 cases developed and caused over 500 deaths. The health department, it seems, was efficiently manned but could not function efficiently because of local circumstances. This illustrates the fact that the danger of diseases which have been practically eliminated is ever present and will reappear on a large scale if barriers are broken down.

More disquieting still is the observation that airplanes arriving in Florida from Central and South American ports may bring hidden in the fuselage live mosquitoes of the yellow fever carrying variety. Since yellow fever still persists in certain parts of Brazil and reappeared in Colombia as late as 1929 with Africa still a great reservoir of the disease, the value of public health work which will prevent the introduction of infected mosquitoes into this country through airplane traffic need not be emphasized.

To a young bookkeeper in Chicago or a taxi driver in Detroit whose votes are equal in weight to those of doctors and lawyers, the employment of able bodied men to search airplanes for mosquitoes might seem to be the height of governmental folly. This would certainly be the case were it not for the possibility of public health instruction. To a person who is familiar with the story of yellow fever along the Atlantic seaboard and in the lower Mississippi Valley, any cost within reason is not too great to incur in preventing the liberation of yellow fever carrying mosquitoes in this country.

Coming of the machine age has had a profound influence over the value of public health instruction. On the farm a case of sickness, unless it happens to be long drawn out, is not accompanied by the devastating economic distress which is apt to follow ill health in the wage earner and even among the relatively well-to-do of the city. The cattle continue to graze, the corn keeps on growing and hens cease not to lay and cackle, while the farmer is convalescing, but wages stop forthwith when the worker is unable to report for duty. Knowing how to prevent disease becomes therefore a matter of the most vital concern under present day social conditions which have reduced the rural population to a fraction of what it formerly was and by the same token have greatly enlarged the urban population. Machines make possible more frequent and more general contact of people with each other and this greatly increases the possibility of spreading communicable diseases.

The public health official recognizes three outstanding principles which govern the value of public health instruction. First, the magnitude and character of the condition or problem which is to be attacked must be clearly defined. Second, the application of preventive measures must be properly timed. Third, the process of prevention must be economically and scientifically sound.

Lately the Massachusetts State Department of Public Health has discovered that chronic rheumatism is economically the outstanding chronic disease problem in that State certainly, and perhaps in the United States and even the world. Although, as is pointed out in the report, 60 per cent. of chronic rheumatism patients are subject to improvement which will restore complete or partial economic recovery, over two-thirds of these patients are either receiving no treatment at all or self treatment. The percentage under treatment varies with the economic status of the patients but even in the well-to-do group less than two-thirds were under medical treatment. The public health authorities in Massachusetts made an actual canvass of one per cent. of the population and estimated on that basis that at any one time Massachusetts has no less than 150,000 cases of chronic rheumatism and that 6,000 of these are completely disabled.

Applied to Illinois these figures suggest the presence of over 260,000 cases of chronic rheumatism in this State with 10,000 completely disabled. Here is a tremendous problem about which nothing is being done and which is practically unknown except to a few students of public health. The public health official sees incalculable value in a program of public health instruction which would result in bringing competent medical skill into successful contact with the victims of chronic rheumatism and which would venture to prevent this affliction.

In New York, the State Department of Public Health has recently discovered that a new case of syphilis comes under treatment for each four births reported annually among the upstate population. In other words, four new cases of syphilis per 1,000 population came under treatment in 1930 and the birth rate in that year was about 16 per 1,000. Few diseases are more expensive to treat than syphilis. Few can result in greater economic and health damage to the patients. Bringing to light these startling conditions has already led to a program of control and prevention of great prom-

ise in New York. That result can be credited to public health instruction.

The very possibility of studies like these two depend upon public health instruction. The public must be willing to provide an organization strong and efficient enough to make this type of research possible.

Once a public health problem is discovered and the means of solution are available, a vast amount of energy, expense and disappointment can be avoided if the control measures are applied at the proper time.

If the barren fields along the Indus River are made to yield maximum crops the water must be diverted from the river into the irrigating canals at the right time. Godfrey has shown that some communities have failed to prevent serious outbreaks of diphtheria when as high as 70 per cent. of the school children over five years of age have been immunized against the disease. The same author has shown that other communities by immunizing no more than thirty per cent. of the children under five years old in addition to fifty per cent. of the five to nine age group, have produced an immediate and striking decline in the diphtheria rate. Harrison expresses the opinion that the immunization of one child under five years old is equivalent in its influence on the death rate from diphtheria to the immunization of three children of the school age group.

Working in another field, Bower found in a study of 8,216 cases of appendicitis which received hospital care in Philadelphia, that the ailment proved fatal to only one in thirty-nine patients admitted to hospitals for surgical treatment within twenty-four hours after onset of symptoms. Among those admitted after the lapse of seventy-two hours, however, one in ten failed to recover. The fatality rate among those admitted between these two extremes was in similar proportion. Applied to Illinois these data indicate that over 600 lives would be saved annually if appropriate treatment was resorted to in all cases within twenty-four hours after onset.

In connection with cancer, the importance of early treatment is even greater. Childe, who has had a wide experience with this disease in England, declares that:

"Approximately one-third of all cancers in males and one-half of all cancers in females, occur in situations which must attract early attention to their victims and are capable of removal and therefore of cure."

At the same time the Massachusetts State Department of Public Health, in a study of 1,252 cases which came to the State-aid clinics for advice, found that the median delay between first symptoms and first consultation of a physician is six and one-half months. Educating the public in a way that would cut down that element of delay in obtaining competent medical advice from six and one-half to one or two months offers the substantial hope of saving from fatal cancer about 3,000 people annually in Illinois. The Indian farmer who waited until the leaves of his young cotton plants had withered and begun to dry before calling for water from the irrigation officer could not expect a heavy yield of mature cotton.

Perhaps the outstanding subject of controversy at the moment in the field of medicine and public health relates to maternal mortality. Nearly all of the agitation revolves around the delivery room. Reliable studies show, however, that the difficulties which lead to fatal termination in a large percentage of the deaths under modern conditions begin long before obstetrical service needs to be considered. Miss Grace Abbott, chief of the federal childrens' bureau, for example, reports that one out of every four maternal deaths due to puerperal septicemia is preceded by induced abortion. Responsibility for induced abortion could scarcely be laid at the door of the delivery room. Studies in Illinois show that involuntary abortion precedes septicemia in another twenty-five per cent of fatal cases attributed to this condition. Even if the quality of the medical service where induced abortion appears is culpable the reason is that the illegal objective of the patient steers her away from high grade doctors. Again, the State Department of Public Health in Tennessee has shown that the maternal death rate among women who received prenatal care through county health departments was only 2.5 per 1,000 births, while the rate among those in the same county who received no prenatal care was 8.3 per 1,000 births. The New York Maternity Center Institute reports that among

its clientele who receive prenatal care the mortality rate of mothers from complications of childbirth has been reduced by 66 per cent. The Commonwealth Fund has demonstrated similar results under widely varying conditions. While the accuracy of statistical evidence in reference to the value of prenatal care has been questioned, it would seem that a physician who interests himself in prenatal care would be satisfied with nothing short of the best obstetrical service. Good prenatal care, in other words, may be calculated to foreshadow good obstetrical care in a large majority of cases.

Emphasis might be, therefore, very profitably shifted from obstetrics to prenatal care in the efforts to cut down maternal mortality. Incidentally, prenatal care has a profound influence over the welfare of the prospective baby as well as that of the mother. It seems probable that the skill and ability of available medical and hospital service is able to safeguard the lives of prospective mothers to a much greater degree than they are permitted to attempt. The public health official sees in the situation the possibility of great improvement by a shift in the time of utilizing medical knowledge. The greatest immediate benefit would seem to be dependent upon adequate prenatal care.

These illustrations concerning the time element apply to the whole field of preventive medicine. Time is a factor of the greatest importance in the success of any preventive procedure and no less in respect to health than anything else. Sometimes this factor is measured in the age of the individual or population concerned. Sometimes it is measured in hours or days after onset of certain conditions. Always it is involved in matters of health. The public health official recognizes in no uncertain terms the futility of bolting the window after the baby is stolen.

Economic and scientific soundness in public health instruction might be taken for granted. There are, however, strong forces at work to the contrary. Vaccination has great opposition which demonstrates liberal endowment with financial resources. Advocates of raw milk are neither idle nor poverty stricken. Commercial interests are quick to appropriate any and every procedure of official or scientific sanction to exploitation for easy money. The far-reaching influence of these movements manifest themselves daily on every hand.

Recently, for example, a campaign to promote the use of toxin-antitoxin was started in Springfield. A mother of more than usual intelligence was approached concerning her young son. "None of that poison will ever be injected into the pure blood of my child", she declared with emphasis. That statement disclosed a mind free from all basic knowledge concerning the immunizing processes which effect all children in this country whether stimulated by artificial or natural means.

Another Springfield mother, the wife of a young lawyer, recently heard through neighborhood gossip that tuberculosis had been found among the cattle at the dairy from which she obtained raw milk. Careful inquiry at the State veterinarian's office verified the rumor. For four years this mother has fed to her baby unpasteurized milk from that dairy. She believed that pasteurization destroyed some important nutritional value which justified her in taking the chance of contamination of raw milk. There are over 10,000 dealers in Illinois who handle only raw milk. Customers of these dealers believe erroneously that nutritional benefits of raw milk outweigh the health risks involved.

These various phases of the problems involved in public health work and public health education indicate that there is on the one hand a great need for the practice of preventive medicine. On the other, there is available the knowledge, skill and other facilities which may be applied so as to meet the needs in a way that results in vast benefits from the standpoints of health and economy. The principal shortcoming seems to be facilities for bringing together in a practicable way the need and the remedy. This is exactly the function of official and voluntary public health agencies. The departments of public health are to the field of preventive medicine what the irrigation system is to fertile acres which need water in order to produce crops. Health departments are channels, like the canals through which flow the vitalizing power from its source to the place of need. Utilization of the knowledge is a matter which devolves upon the individuals and the groups who benefit therefrom.

The State public health official believes, therefore, that the building up of efficient local health departments or agencies not only gives promise of great public benefit, but is necessary to the reasonably adequate utilization of preventive and curative medicine. The public health official is not primarily interested in what form local health organizations assume. Experience, however, has indicated that the most satisfactory results are obtained when the agencies are under official supervision.

Thus at LaSalle, Peru and Oglesby, an agency financed from voluntary funds finds that it can work far more efficiently when the medical director is endowed with the legal resources of the official health officer in the communities served. In Evanston, likewise, the voluntary agencies very cheerfully accept the general supervision of the city health commissioner because more and better results can be obtained in that way.

H. G. Wells declared in his *Outline of History*, that "Human history becomes more and more a race between education and catastrophe."

There are all sorts of catastrophes. The world might collide with some other celestial body. Some trick of fate might cause the world to burn or freeze. According to one new theory the universe is expanding very much after the fashion of a rubber balloon under inflation. In that case the whole thing might burst some day leaving a vast empty void where once the earth and other celestial bodies were wont to travel.

Mr. Wells probably had no such physical catastrophe in mind. He saw in the changing social conditions increased danger from disease and from the deterioration of race stock. He saw on the other hand the possibilities of controlling the factors which influence the health of body and mind. Disregard of public health education will certainly invite the catastrophe which Wells had in mind. It is the primary function of official health departments to steer public health activities into the right channels at the right time.

DISCUSSION

Dr. Isaac D. Rawlings, Chief, Bureau of Communicable Diseases, Chicago Board of Health: Public health education and instruction, as a rule, must precede all important public health accomplishments.

To illustrate, for several years prior to 1891 there was much discussion in the public press and elsewhere as to the benefits that would accrue to the people of Chicago if a drainage canal could be constructed to make the highly polluted waters of the Chicago river flow away from Lake Michigan instead of emptying that sewage into Lake Michigan, Chicago's water supply.

The benefits to be derived were repeated and reiterated time upon time, stressing these benefits in terms of lives saved and sickness prevented. The intrinsic value of this construction of a drainage canal was estimated in dollars also. Without such public health instruction and education, it would have been impossible to have persuaded Chicago's citizens to tax themselves over $45,000,000, an enormous sum in those days, to pay for this drainage canal. Yet, the wildest dreams of the health officer of 1891, with his city constantly cursed with typhoid epidemics and hospitals crowded with cases, were far short of the real benefits that have resulted, largely from the moneys expended for that drainage canal.

To show these benefits, let me tell you of Chicago's typhoid fever record in 1931, when the lowest level in her history was reached with but 97 cases and 13 deaths. When we contrast this record with that of 1891, when the agitation for the building of the Drainage canal was at its height, we learn that had the rate of 1891 still prevailed in 1931, Chicago would have had over 60,000 cases of typhoid fever instead of 97 cases, and over 6,000 deaths, instead of 13. Estimating the value of a human life at $5,000, this saving for this one disease in one year had a financial value of over $300,000,000, and each year the $45,000,000 invested in 1891 to 1900 in building that Drainage canal is yielding in interest six times the amount of the original investment.

I know of no better illustration of Baxter K. Richardson's oft repeated statement that money invested in public health yields not only a large interest return, but also a big bonus.

We do not need to go as far away as New Haven to get statistics, for in our own state we have an equally striking example of the value of public health work.

The city of Chicago shows these contrasts:

Deaths per 100,000 people

	1881	1931
Diphtheria	186.9	6.2
Scarlet fever	34.6	5.1
Smallpox	218.5	0.0
Typhoid fever	105.2	0.38
Whooping cough	29.1	2.3
Tuberculosis	220.0	66.2
Measles	20.4	1.8
Total	814.7	79.6

These diseases in 1881 caused 4,402 deaths, and in 1931 but 2,753 deaths. If the rate of 1881 had prevailed for 1931, there would have been 28,186 deaths instead of 2,753, to say nothing of over 280,000 cases of illness prevented.

Here is another splendid example of the value of preventive public health work, much of which is due to public health education over a series of years.

After years of public health instruction and education on the value of the pasteurization of the milk supply for a

large city, we find that in Chicago in 1916, for the first time, all milk was pasteurized, except one per cent, which was certified.

During the five years prior to 1916 there were 13 milk-borne epidemics embracing more than 10,100 persons, and the striking thing is that not a single milk-borne epidemic has occurred in the last 16 years. This is real preventive health accomplishment.

Another illustration of results achieved largely through public health education and instruction is Chicago's smallpox record.

Without a compulsory vaccination law, almost 1,000,000 (983,876) vaccinations have been made in Chicago since 1920 by the Chicago Board of Health alone, while the total births for this period number less than 700,000 (694,024). Note the result of this continuous vaccination.

In 1931 Chicago had but 58 cases of smallpox, which is the least yearly total, except one, since 1916. The rest of the state of Illinois reported over 1,700 cases of smallpox in 1931, and a goodly number were in Northern Illinois. As it costs Chicago about $150 to hospitalize and care for each smallpox case within her limits, it represents a worthwhile financial saving if Chicago can have only one-thirtieth as much smallpox to care for as does the rest of the state.

Another good illustration of the value of public health instruction and education is the toxoid-toxin-antitoxin campaign over the United States. The value of this preventive procedure had to be sold to the fathers and mothers before consent for the actual immunization could be obtained.

In this connection, you may be interested in that phase of the toxoid-toxin-antitoxin campaign in the parochial schools of Chicago. After much preliminary ground work, and numerous conferences between His Eminence, Cardinal Mundelein, and his representatives and the president of the Board of Health, Dr. Bundesen, and his co-workers, in one week there were distributed to every Catholic church in Chicago enough of these leaflets in eight languages so that each parishioner in each Catholic church should have one in the language he understands. These were distributed after each mass on Sunday, April 3. A letter from the Cardinal had previously been sent to each church and parochial school urging the full co-operation of those in authority in getting to their school at an announced time all preschool and school children for the immunization of all against diphtheria.

The Chicago Board of Health sets up an immunization center in one parochial school after another until all this work can be completed.

This plan is especially valuable in reaching the preschool groups and can only be done efficiently in the parochial schools with the full and complete co-operation of those in authority.

These are but a few, taken from the many convincing Chicago examples of the truth that public health education and instruction must precede and lay the foundation for many important preventive public health programs.

"The doctor will see you inside," said the nurse as she helped the patient onto the operating table.—*N. U. Purple Parrott.*

DISCUSSION OF SYMPOSIUM ON HEALTH EDUCATION

Dr. H. E. Kleinschmidt, New York City: Dr. Beard's eloquent plea for systematic health education presents a somewhat gloomy picture of the race between education and final disaster. Moses, in leading the children of Israel to the promised land, spent some forty years in the wilderness. I have a hunch that he was deliberately lost for forty years, waiting for a new generation to rise. I sympathize with the spirit of Dr. Beard's paper, that we must make a more definite and conscious effort to get out of this wilderness before disaster overtakes us.

He said some excellent things about leadership without a following. The health officer is armed with knowledge. He could lead us from the wilderness if he had intelligent followers. Public health progress is held back by a lack of information and appreciation on the part of the people.

Teaching the fundamentals of hygiene is important —not merely the learning by rote of rules, for medical science is a living science, growing day by day and, unless people are trained to reach sane conclusions, progress is not going to be very steady.

Speaking for the layman, Mrs. Lancaster sounds this note, that it is important to cultivate in the people a health consciousness. Good! but let us not forget that there is danger of going too far with health consciousness. Health is not an end in itself, but merely the means to an end. Doctors are familiar with that pest known as the neurasthenic, who is constantly worrying about his "innards."

As the symposium went along, evidence piled up to show that after all there is no reason for discouragement, for speaker after speaker cited examples for accomplishments, such as the wiping out of smallpox in certain places; the great reduction in deaths from tuberculosis and typhoid and so on. Health education is already bearing fruit.

Dr. Lewis spoke of the increased demand for health protective procedures on the part of patients. He also said that something more is necessary than the mere presentation of facts. While he did not use the word "hormone," he probably had that in mind. We need an activating "hormone" or motivator which will cause people to act. In modern advertising you will find that the "kick" at the end of every advertisement, the final impression that is left with the reader, is to "do something about it," to act. It is not enough to give people information, hoping they will carry out the desired actions.

Dr. Lewis also had a few kind (?) words to say about the so-called political health officer. The butcher, the baker, the candlestick maker, may still serve as the township health officer. That protection against scarlet fever, typhoid and a host of other dangers may depend upon an untrained layman, appointed perhaps by a political ward heeler, is deplorable.

Dr. McManus, speaking for the schools, suggested something very excellent, I think, and that is that health education in the school is a matter of living it day by day, making health instinctive as it were. Robert Ingersoll once, in one of his fiery orations,

shook his fist and said, "If there is a benevolent God, why did he make disease and not health contagious?" and the reply was that health *is* contagious.

Dr. Richardson gave us the suggestion of the river whose power to make fertile the land, is being wasted. He suggested that what is needed is a little engineering, in other words, better educational technic. Health facts we have but we fail in delivering them. We still relegate health education to the office boy. Marvelous strides have been made in school health education; the training given in our normal schools is most excellent, but in mass education we are still very much behind. Some of the health publicity now issued is terrible if compared with modern advertising. We must learn to deliver the goods to the people in an interesting and entertaining way. Delivering health education to the people is not a job for the Jack of all trades. We need very definite methods and means of delivering health messages to the people.

I have great respect for the old-fashioned doctor, the saddle-bag doctor. Perhaps he didn't know much. He read his Gray and his Osler and little more but he did much good. He was the Father Confessor, made sacrifices, served the people well. But in the present day, that is not enough. Today we need the scientific doctor with instruments of precision, the x-ray, the electrocardiogram and what not. We are no longer satisfied with saddle-bag medicine. Similarly we must get out of the era of saddle-bag health education and become more scientific.

DISCUSSION ON SYMPOSIUM FROM LAYMAN'S POINT OF VIEW

Mrs. N. G. Symonds, Hinsdale: Dr. Beard's paper is most comprehensive and challenges our attention. Health Education in order to be of value must include mental, moral, and physical health and be linked up with the economics of state and community.

There seems to be an air of ineffectuality about our efforts as laymen that might make one terribly discouraged, but we dare not cease to hope. There must be ways and means of intriguing the attention and interest of the leaders of communities who will "recognize the necessity for the measures advocated by experts in preventive medicine and who are willing to set an example," as Dr. Beard has said.

I have always maintained that to be a successful housewife and mother one had to be a "Jack-of-all-Trades." If one doesn't actually perform all the duties that go to make up a smooth-running household and happy family, at least one must know how, in order to secure for herself and those she loves, the best services and values, from those who wait upon her.

A group presentation of this important subject brings with it a distinct challenge to any housewife and mother. Laymen should be intelligent concerning all such phases of Health Education as are presented here this morning—an analysis and interpretation of which lie well within the reach of organizations who are striving to create a better understanding of the importance of good health in relation to education, morals, happiness, and the good life.

Health Education is at the crossroads—four ways to go—backward, left, right, or forward. What elemental standards shall we strive to build and maintain against *all* odds?

Four words have been brought to my attention recently, during this "winter of our discontent": Impression, Opinion, Knowledge, Conviction. Impression touches simply the outside of our lives. Opinion is an acquaintance who nods to us and is rarely a part of ourselves. Knowledge is a servant, impermanent, more or less impersonal, and the possession of it may not result in conduct; but—Conviction is our own child—is a living, compelling motive in our conduct. So it is with my attitude towards the place that lay groups should occupy in a Statewide Health Education Program.

Many people's attitudes go no farther than Impression and Opinion. Knowledge may entirely fail, may be laid away on the shelf. Years may be spent on dead languages, and living interests be smothered under the weight of learning. But—only Conviction organizes a life and sends itself out to bring about results. So, we must find fresh courage to attack these problems.

We must educate our lay groups to a fuller realization of their responsibilities for health. We must set up a health standard for our teachers, though we all know that except in the fundamentals of hygiene, their judgment would not be acceptable to the medical profession or the mothers. They, the teachers may be fully aroused to a sense of their exalted duties, but they must always and always reckon with the mothers. If the mothers are victims of fixed ideas, then the more potent influence of home will seriously hinder the education of the child. Our hope lies in educating the children.

My principal contact in promoting Health Education is with the Illinois Congress of Parents and Teachers. We are an educational group—we are 33 years old in Illinois, with an individual membership of about 93,000 —carrying a statewide program of Child welfare on an annual per capita dues of 20 cents, 5 cents of which goes to our National Organization. We are entirely a volunteer group, no salaries are paid except for office stenographers. Volunteer Service is beautiful, it needs to be perfected, but lay organizations are powerful, and they are moulders of public opinion through education.

It lies within the precinct of lay organizations to set up simple standards of healthy living as a plan of work in regard to rest, cleanliness, daily health habits. medical and dental care, and a general knowledge of legislation concerning health and safety, and of local ordinances pertaining to communicable disease.

If specific methods of our work along Health Education interest you, I might list, Study classes, book reviews, schools of instruction, dramatics, health clubs, Roundtable Conferences, Loan Papers, Speakers Bureau, questionnaires, programs built around findings of the White House Conference on Child Health and Protection, School Health appraisals, the Summer Round-Up, County Health Unit plans, and correlate wherever possible with other agencies engaged in Health Education, to eliminate duplication of efforts.

The tax-payers are usually the parents to whom we

must direct definite helps in the correlation of accurate information concerning the relation between economics, professional ethics, and the teaching of Health Education.

Group effort is often more effective than individual effort in promoting a program, especially where community spirit is strong, or where it needs to be strengthened. I refer especially to the Summer Round-Up Campaign for the pre-school children, which is a project of the National Congress of Parents and Teachers and promoted by the several states. This campaign is endorsed by the American Medical Association and, in Illinois, has the backing of your organization. There is a gap in the care of children between that of the infant and the school child, called the "run-about age." The Summer Round-Up was built for just this aged child. Its name implies its method—to round up the children in the early summer, have their defects discovered by physicians and dentists, record them and have them corrected that they may enter school in the fall term as free from remedial defects as possible. In presenting this plan of Health Education to the parents, we recommend that the examinations be conducted as far as possible in the offices of the family physicians and dentists, with the parent present.

The record cards used in the Summer Round-Up are furnished by the American Medical Association. Health records are important. They comprise the health history of the child. The spirit of co-operation on the part of the medical profession in this project is priceless and must not be underestimated. Leaders of these Summer Round-Up groups are instructed how to proceed with the plans. We have had difficulties at times when overzealous lay persons have brought down criticisms of the profession on our heads, when they have undertaken projects with little or no recognition of authority or consideration of the ethics of the profession, or of the doctors' lack of understanding of organization methods. Through the kind offices and co-operation of your Committee on Education, the path has been far less thorny during the past few years.

McLean County (Mrs. Lancaster's county) has done valuable work. I feel that our best efforts in solving this problem lie within a County Health Unit Plan. It is the natural government unit, and efforts should be correlated to avoid overlapping. A general plan for any County Health Unit should include the prenatal care of mothers and stress the importance of breast feeding of infants.

I have been a member of the Advisory Council of the Child Hygiene Division of the State Department of Public Health for the past five years. This Council is made up of representatives of organized medicine, dentistry, and nursing, the Federation of Women's Clubs, and the Illinois Congress of Parents and Teachers.

Many phases of health education have been produced through this council, comprised of those three professional and two lay organizations. This County Unit Plan is one, and the School Health Appraisal another. This latter is a set of questions that can be graded, as to the conditions of building and grounds, professional health service, and the educational program in the school. The form is a tentative one and has been applied to more than one hundred schools in Illinois with various findings. It is a sort of a measuring stick, and the appraisals have often brought to light important projects that can be remedied by co-operation of parents with the school authorities.

The general plan of work of the Health education division of the Illinois Congress of Parents and Teachers includes campaigns for annual medical and dental examinations, for vaccination against smallpox and immunization against diphtheria.

When we can stand before our groups and state with authority that for 130 years vaccination has been a sure preventive of smallpox; and when the burden and anxiety of that dread disease, diphtheria, can be lifted by immunization, surely the lay groups have a part to play in this great educational movement for Better Health.

A wise Health Education Director of any lay group should be constantly aware of the menace which anti-medical groups wield—whose religious beliefs preclude any support for the simplest basic legislative measures, such as prevention of blindness or for vital research. A wise Health Education Director should know that the administration of health affairs of county and state must be separated from partisan politics; that Health Education must be advocated by influential groups and citizens of generally known integrity and good will, who are free from self-seeking interests; and—we, lay people want the assurance of the friendly understanding of the professional people and public health officials.

I believe that within the past two years we have made great strides in approaching this understanding.

There are at least three professions that are sort of *one*-man jobs: medicine, dentistry, and the law—where your livelihood and your success depend entirely upon your individual efforts. These professions are backed by neither corporation, nor salary schedule, though the law like the ministry does have some organized support. Perhaps medicine and dentistry, too—if hospitals and schools can be counted. But from a point where an evaluation can be placed on the influence and strength of organization life, your experience is limited. Lay organizations are powerful, and with leadership from professional people, our lay groups can be a great channel to spread this education for better health.

In closing, I would offer these five points which I think are worth striving for:

1. Vigorous, intelligent lay organizations are needed for stability and promotion of the work. 2. A realization of parental responsibility in regard to health. 3. The assurance of a friendly understanding between professional leaders and lay groups. 4. Freedom from partisan politics and self-seeking interests. 5. A program of service, personal and educational, covering periods of five years, to assure familiarity with plans and policies.

So, I hope I have conveyed some impression to you. You may form your own Opinions of their value.

You have Knowledge which we want you to share with us, that we may acquire more wisdom. And

I have the Conviction that we can work together for a better plan of Health Education.

No longer is it enough to follow the old Doctor's prescription:

"I physics, bleeds and sweats 'em,
If they die—why should I cry—
I. Lettsum"

Persistency and courage will be required, but it will be worth it.

Dr. J. F. Maciejewski, La Salle: It is really a conundrum as to what to say about a paper of this kind. After reading it several times it seems to cover the ground so thoroughly that only a few high spots should be touched upon, possibly to enlarge the few points somewhat. The trend of the discussion is evident, it is education.

The general public is quite educated nowadays in matters of public health, probably more so in proportion than an average general practitioner. In spite of this it is the general practitioner who in the long run is responsible for the education of the public. His preaching day in and day out at the bedside and in the sick room carries the weight of the gospel of preventive medicine.

The periodic health examination is still in its infancy and a great deal of work must be done to educate the people in order to accomplish anything at all in this field. It is very pleasing and gratifying to hear the following words, "During the rush of practice I do not believe the average doctor realizes how important an agent he is in the prevention of diseases." The sooner the powers that be are willing to admit the fact that no satisfactory progress can be made in the field of public health without free and sincere cooperation of the family physician, the better and quicker this problem will be solved.

We believe that the people should be immunized against the contagious diseases but the question comes up, who should do the work? Where does the work of the public health department end and the practice of medicine begin?

Economics, a big word. But who is poor and who is not so poor? Where is the line of demarcation? How much work and what kind of work should be done by a health department? If a great deal of the work is done or should be done by a general practitioner, who should pay for it and how much?

In regard to the suggestion of a federal, state, county and a community health department working in close cooperation, immediately a question comes up, will they? And having such departments who is to direct these bodies, doctors of medicine or laymen? Are these to be political organizations? The essayist answers part of these questions by stating that of 2700 health officers 200 are doctors.

And this leads to state medicine and bureaucracy. Unless the medical profession takes more active part in things the socialistic program may come sooner than we expect. The family physician should be the backbone of the public health of this nation.

Dr. A. A. Crooks, Peoria, Illinois: I think that every one who has listened attentively to the presentations of the various essayists contributing to the symposium, will agree, that controversial questions concerning ideals, practices, methods of approach and challenges, opening up new fields of endeavor in health education have answered the queries, statements and challenges of their fellow essayists in such manner that their efforts practically constitute a discussion of the whole.

With such an analysis, may I not present a summation by quoting some of the outstanding expressions from the theses of the participants, believing, as I do, that such repetition will serve best in indelibly fixing in our memory the salient points pertinent to the question.

Quotation from thesis of Dr. Beard.

"A demand for the use of preventive medicine has been thrust upon the doorsteps of the home, school, and college. Parents, teachers, and educators must apply it if they are to make their full contribution to the promotion of health, to the prevention of disease, and are to give their complete cooperation to the succeeding generation in adjusting itself to a civilization ever becoming increasingly complex. They must instruct children and youth how to live as well as how to read, write, and appreciate cultures past and present.

Urbanization of the greater part of the population, the rise of industrialism, and the development of this machine age were possible only because preventive medicine made cities more than a place where people collected to be destroyed by pestilence. The extraordinary development of rapid transportation has increased the hazard from communicable disease beyond the ability of health officials to deal with it without the prompt cooperation of the educated laymen. The increase in application of physical, chemical, biological, and social science to the problems of life, vocation, engineering, and industry and the complexity of modern civilization make a sound knowledge of hygiene and sanitation not only desirable but essential, if an individual is to be able to protect himself and his family and to function as an intelligent citizen.

During the transition of the last six decades, a terrible price has been paid in avoidable disease, suffering, and death because public sentiment gave inadequate support to immunization against smallpox, typhoid fever and diphtheria, delayed the development of sewerage systems, failed to provide safe water supply, has been slow in insisting upon the pasteurization of milk, and has permitted over-crowding, improper housing, and insanitary environment. The knowledge, methods and the technical experts have been available to make living conditions wholesome, but the public has procrastinated because its leaders did not appreciate the opportunity they had to contribute to the health and happiness of their fellow beings. If they had received adequate health education, millions of dollars would have been saved, much suffering would have been avoided, and thousands of untimely deaths prevented.

The great advances in preventive medicine have been made largely in the field of communicable diseases and in the prevention of infant mortality. Progress here

has been largely through the varied and intelligent use of police power by health administrators. It has required relatively a minimum amount of cooperation from the public. Measures for the further reduction of disease and for the increase in the average expectancy of life have to become more and more personal, involving the habits of individuals and the customs of the people. Such is particularly true in the control of cancer, and of the so-called degenerative diseases of the heart, kidneys, and blood vessels. Unless the leaders of the community appreciate this fact, recognize the necessity for the measures advocated by experts in preventive medicine, and are willing to set an example, advancement will be difficult and slow. Unless the citizen is educated sufficiently in the elements of preventive medicine to lead in the promotion of health in his community, it will inevitably be a victim of "the blind leading the blind."

Approximately 35% of the men who matriculate in college have defects which would cause their rejection under the draft. Skeletal defects, defective teeth, poor vision, undeveloped musculature, incorrect posture, heart lesions, deafness and renal disease speak pathetically but eloquently of what might have been avoided if parents had known how to promote and to protect the health of their children.

There is no state in the union in which delinquency, dependency, mental deficiency, and social maladjustment are not becoming problems of such magnitude as to threaten its solvency and prove a menace to racial vitality. This problem of defectiveness gains in magnitude under the stress of an increasingly artificial existence and can only be met by the concerted action of competent specialists and intelligent citizens. Citizens, to act effectively, must have sound knowledge which will cause them to seek expert advice and provide adequate support to bring it to realization. Specialists without public support in a democracy are as futile as a general without an army.

Each year in Illinois there are approximately eight thousand cases of diphtheria and seven hundred and fifty deaths, and more smallpox than in France, Italy, Germany, Japan and New York State combined. The reason for this is that in many communities certain influential persons, often college-trained individuals, oppose so well established methods of prevention as vaccination and immunization against diphtheria. They not only jeopardize their own health and that of their families, but by their attitude and example indirectly condemn children unable to protect themselves to unnecessary illness, crippling, and death. Is it possible for education to meet its obligation to society until it has made a systematic effort to insure itself against such disastrous failures?

In a democracy the epochal scientific discoveries of the last three quarters of a century in the main, cannot be applied without the consent of political units. Obviously, if the leaders of the public do not appreciate the possiblities of science to promote human welfare and are unsympathetic with its application to living, research is in vain, lifting the common level of life is a phantom, and progress is a realization for the distant future.

Our plea today is for sane, scientific, suitable, systematic education in the primary grades, in the secondary schools, and in institutions of higher learning to create and motivate a health consciousness which will prove a means for the development of physical and mental efficiency, the creation of a wholesome attitude of mind, and for cultivation of moral and social qualities. We are advocating instruction which shall be a decisive factor in determining that the healthfulness of environment shall be commensurate with sanitary knowledge. The demand of the hour is for knowledge essential to intelligent participation in enterprises for civic betterment, and to the assumption of the duty of a well informed citizen. The imperative need is an understanding of Hygiene to protect against disease, to guarantee that the individual shall function effectively for society for the longest period possible, and which shall be a safe guard to the individual and the public against the tremendous economic loss and injury to health from fads, frauds, cults, and quackery. The call is for the dissemination of information having a far reaching influence on vocational success and on the promotion of the welfare of those engaging in earning a livelihood. We are urging the use of the best, cheapest, and quickest method to bring to the public the benefits to be derived from the enormous sums being spent by philanthropists and federal, state, and municipal governments for research.

A nation may create a machine age, excel in labor saving devices, be blighted by unemployment, but ultimately recovery will occur. It may establish a record for divorce, embezzlement, and homicide which astounds the world, yet maintain its stability. It may enter a jazz era, emerge with a different moral and religious outlook, and still hope for a better day. If children capable of being strong, well-balanced men and women are being trained to meet the problems of tomorrow, its future is assured. But if the quality of the life of its citizens is undermined by ignorance, bally-hoo, selfishness, and artificiality, neither sky-scrapers, nor cinemas, nor radios, nor armies, nor navies, nor philanthrophy, nor culture can save it from the oblivion of Rome, the decline of Greece, or the decay of Egypt.

Again, our plea is for systematic health education which, when motivated, will provide the leaders of tomorrow with the wholesome environment, physical vigor, mental alertness, and spiritual poise essential to guarantee that the republic established in the heart of North America shall endure."

Quotation from Mr. Richardson.

"In Illinois this public health official sees a vast amount of needless wastage of human life. He sees on the other hand a never-failing source of knowledge, flowing through the channel of the medical and sanitary professions, which if applied properly would convert thousands of lives made barren by preventable sickness into rich human experiences measured in terms of both happiness and economic benefit.

The public health official sees flowing in the channel of medical and sanitary knowledge a vitalizing force which has the power to prevent or modify typhoid fever, diphtheria, smallpox, tuberculosis, rabies, measles, scarlet fever, whooping-cough, malnutrition, syphilis,

gonorrhea, cancer and ill-health in general. Here and there throughout the country these channels of knowledge have been tapped by laterals which have resulted in the spread of this knowledge to whole communities which have succeeded in eradicating completely some diseases and in greatly reducing the prevalence or fatal and disabling character of others.

The value of public health work seems too obvious to warrant discussion. Who, for example, would wish to turn back the calendar to days of yellow fever when strong men turned pale at the mention of that disease and whole communities fled in terror from their homes at the approach of the disease which paralyzed commerce and left destruction in its wake? Who, indeed, would choose to live through the gay nineties when typhoid fever killed its thousands, while diphtheria and tuberculosis killed their tens of thousands? Who would go back to the days before the practice of pasteurization made milk relatively safe for city children? Who would bring back malaria and cholera which public health work has successfully combated? To ask these questions is to answer them. One after another communicable diseases have been brought under control through the practice of what is generally understood as public health work and this success makes possible city life as we find it today.

Of course, public health work and preventive medicine can go forward no faster than the public demand or at least public toleration. The profits from public health work are large, but the activities cost money and the public must pay the bills. Public health instruction must therefore, precede public health work.

The public health official recognizes three outstanding principles which govern the value of public health instruction. First, the magnitude and character of the condition or problem which is to be attacked must be clearly defined. Second, the application of preventive measures must be properly timed. Third, the process of prevention must be economically and scientifically sound.

Once a public health problem is discovered and the means of solution are available, a vast amount of energy, expense and disappointment can be avoided if the control measures are applied at the proper time. Godfrey has shown that some communities have failed to prevent serious outbreaks of diphtheria when as high as 70% of the children over five years of age have been immunized against the disease. The same author has shown that other communities by immunizing no more than 30% of the children under five years old in addition to 50% of the five to nine age group, have produced an immediate and striking decline in the diphtheria rate. Harrison expresses the opinion that the immunization of one child under five years old is equivalent in its influence on the death rate from diphtheria to the immunization of three children of the school age group.

Working in another field, Bower found in a study of 8,216 cases of appendicitis which received care in Philadelphia, that the ailment proved fatal to only one in 39 patients admitted to hospitals for surgical treatment within twenty-four hours after onset of symptoms. Among those admitted after the lapse of 72 hours, however, one in ten failed to recover.

In connection with cancer, the importance of early treatment is even greater.

These illustrations concerning the time element apply to the whole field of preventive medicine. Time is a factor of the greatest importance in the success of any preventive procedure and no less in respect to health than anything else. Sometimes it is measured in hours or days after onset of certain conditions. Always it is involved in matters of health.

Economic and scientific soundness in public health instruction might be taken for granted. There are, however, strong forces at work to the contrary. Vaccination has great opposition which demonstrates liberal endowment with financial resources. Advocates of raw milk are neither idle nor poverty stricken. Commercial interests are quick to appropriate any and every procedure of official or scientific sanction to exploitation for easy money. The far-reaching of these movements manifest themselves daily on every hand.

The various phases of the problems involved in public health work and public health education indicate that there is on the one hand a great need for the practice of preventing medicine. On the other, there is available the knowledge, skill and other facilities which may be applied so as to meet the needs in a way that results in vast benefits from the standpoint of health and economy. The principal shortcoming seems to be facilities for bringing together in a practicable way the need and the remedy. This is exactly the function of official and voluntary public health agencies.

The State public health official believes, therefore, that the building up of efficient local health departments or agencies not only gives promise of great public benefit but is necessary to the reasonably adequate utilization of preventive and curative medicine.

It is the primary function of official health departments to steer public health activities into the right channels at the right time."

Quotation from Dr. Lewis

"As I look back ten years I can see much progress in the education of the physician and the layman. A few outstanding advances come to mind. The deficiency diseases are now quite well worked out and we have a better understanding of the vitamines and their importance in the diet. The value of breast feeding has been generally broadcast and I am sure is saving many babies from illness and death. Now people so generally know about balanced diets that it is unusual to see deficiency diseases even in dispensary patients. I have found that mothers know about orange and tomato juice and why it is given. They now usually ask when to start cod liver oil. They know about sun baths.

Women are coming to us earlier in pregnancy and I believe the average physician is giving better pre-natal care. We periodically check the blood pressure and urine so that we will be informed of the approach of eclampsia. The early diagnosis of syphilis has allowed us to give pre-natal treatment with a consequent prevention of a severe infection in the baby. Preventive medicine is modifying our care of the woman while in

labor. Because of the danger of carrying infection into the birth canal we no longer do vaginal examinations unless forced to and then only under aseptic conditions. We have learned to keep adequately informed about the progress of labor by rectal examinations.

Of recent years a new field of medicine is being successfully investigated. Allergy, a condition that has made the lives of millions of people wretched, is responding to preventive methods. We can now tell people, with a great deal of confidence, that we can prevent hay fever and asthma. Hives, migraine, colon disturbances and certain type of eczema are prevented in many instances by the elimination of the offending substances from the food or surroundings.

In another field we find that the examination of the milk herds for communicable disease and the destruction of infected animals has played a large part in the marked decline of bone and gland tuberculosis. Pasteurization of milk and proper refrigeration of food has been a big factor in the constantly declining infant death rate.

People are beginning to realize the importance of early treatment in disease. Older physicians have been impressed by this different attitude. Formerly effective treatment was hopeless. Now we are often called so early in an illness that diagnosis is difficult. This condition of affairs has even caused a change in medical textbooks. The older so called textbook picture of a disease is now often considered an advanced condition. Recent textbooks stress early signs and symptoms. Ten years ago we were rarely consulted for periodical examinations. They are becoming steadily more frequent.

In the field of immunization we have made progress. Last year the Illinois Department of Public Health had records of 194,972 children who received diphtheria immunization. Ten years ago there were very few such immunizations. Last year there are records of 87,150 smallpox vaccination. Ten years ago, not nearly so many. Infant death rates have steadily decreased, the 1930 rate being 63% of that of 1920. Here prenatal care, better obstetrics and better infant feeding have gradually and progressively improved a formerly bad situation. Preventing medicine and better medical care have helped force the puerperal state rate of 1913 to 65% of the 1920 rate and the tuberculosis rate of 1930 to 62% of the 1920 rate.

There are four outstanding reasons why Public Health Education and its program will never be 100% accepted. First, there are in this state alone thousands of Christian Scientists and Anti-vaccinationists. There are people who have as their general physician, chiropractors, osteopaths, napropaths and so on. Education won't touch these people. But even they are benefited by our program. They drink pure water and milk. They are exposed to fewer contagious diseases because disease prevalence is being reduced.

The second obstacle to public health effectiveness is the lack of information by the medical profession as a whole and their lack of application of the facts that they do know. I believe I am right in saying that the younger doctors are practicing more and better preventive medicine that the older practitioners, largely because of better training along public health lines. Preventive medicine is relatively new in the medical curriculum and the older men practice only the methods they have been fortunate enough to pick up. Because of greater interest in problems of diagnosis and treatment, I believe that relatively few general practitioners meet with this section. For that reason I would suggest that men interested in public health have some place on the programs of the medical and surgical Section.

An important factor that retards public health advance is the lack of information of the layman and his apparent lack of interest when he is informed. It seems that something more than the presentation of the facts is necessary to make people realize the advisability of protecting themselves. In discussing the lack of layman cooperation we must remember that the low economic status of a large number of people causes them to put off preventive measures that they consider they cannot afford. Health protective measures have not been established in the public's mind as a necessity.

Let us turn to the future. That is where we project the ideals that have been aroused by past experiences. What can we do to better advance the philosophy of "Get well and stay well?" I have several suggestions to present for your discussion. From the general physician's standpoint they seem practical. First, we should have active federal, state, county and community health departments working in close cooperation. Figuratively they should represent the power stations from which radiate the preventive medicine and health activities. In my opinion the federal and state departments are doing a good job. There is room for improvement in the county and community organizations.

The effectiveness of the public health program could be increased a great deal by extending education along these lines to the children now in High school and in the upper grades. It seems reasonable to me that some knowledge of the methods of keeping well might be as important to the future welfare and happiness of the individual as appreciation of literature, for instance. Few High school graduates understand the general physiologic processes that take place in their bodies. They are only recently being taught how to select a proper diet and they know very little about the bodies defense against disease. The individual should be taught his part in the general health program of the community. He does not usually get such instruction at home. Quarantine is still considered a form of imprisonment rather than a means of protecting others. A discussion of the possibilities of disease control and prevention would cause a more intelligent understanding of public health activities. For an individual to be happy and useful he must be well. Doesn't it seem reasonable that he should be taught how to keep in the condition of happiness and usefulness?

If we plan to extend our education of the laity we must be sure that the physicians they consult about health problems are interested. Education of the laity requires that physicians be able to answer and participate in a discussion of their questions.

There are several fields of preventive medicine that still challenge us. Venereal disease incidence remains

much too high. Theoretically, the curing of each case that presents itself and the clearing of the source of the infection should in a short time make the incidence small. Actually the cases do not all stay under treatment until cured and the source is rarely brought under treatment. The number of rabid animals is increasing in the State and we must take some definite preventive action. Trachoma and gonorrhea neonatorum are not under control. It is my belief that soon an arthritic will be considered as a sanatorium case as the tuberculous now is and that the public health agencies will see that indigent cases are supported there as now obtains for the tuberculous. Mental disease or inadequacy fills 50% of the hospital beds of the country yet we are apparently only recently realizing that mental hygiene might prevent some of this terrible loss of happiness and usefulness. A large part of general practice deals with treating emotionally and mentally disturbed individuals. We realize the need for prevention but haven't done much about it.

The entire public health program of education and prevention needs the cooperation of the physician. They can and should be induced to assume the major responsibility of the program. General broadcast by radio, through literature, the press, advertisements, and all the devices available, will not serve to answer intimate personal questions on health and on disease prevention. The private physician should eventually fit in here most effectively.

There has been definite advance in public health education. This group of public health officials should be active in getting the general physicians and layman to do their part in the job and the future will show still greater progress."

Quotation from Mrs. Lancaster.

"We are told education is the sum total of those experiences which modify conduct; its aims include worthy home and community membership; and that this end is reached by response to selected stimuli. With health education as with all education someone must recognize the aim, supply the selected stimuli, and furnish the materials and methods of reaching the goal.

The public is beginning to develop a health consciousness. We as layman are beginning to recognize a difference between negative and positive health. Furthermore, we recognize a distinction between individual and community health problems.

Unfortunately our medical profession has been too busy building its own clientele, earning its own bread and butter, caring for its own several patients, passing the layman by with only momentary directions and advice unless very sick, to supply any of the "selected stimuli" or in other words to teach the public the meaning of positive rather than negative health.

All education comes slowly and with a cost. We who have been aroused are facing with you doctors, nurses and health officers the question of furnishing the selected stimuli for the others. Can the human desire to make our bodies carry us and our children as far as we are physical and mental capable of going turn the attention of the public to this problem of health? Or is the tax-payer who is "money conscious" going to become "health conscious" because he recognizes the law of individual differences.

But the tax-payer is still wasting his money when a child goes to go to school physically unfit to carry home what is offered him there, or when he, an adult muffs a business deal because he was "so tired", or enters a sanatorium because his body is unfit.

The tax-payer should convince himself and his family physician it is better to have a complete examination periodically as he does his dental examination even though he feels well rather than wait until illness or "that tired feeling" forecasts a bank account devastating illness or a tax supported rest in a county sanatorium. In connection with the last circumstance a well developed and enforced health and sanitary education could well save much money that is now used in rehabilitation.

The struggle of the individual to produce a livelihood occupies a small and decreasing fraction of his time and energy. This permits and perhaps necessitates a changed viewpoint in regards to the elements of living. In this new viewpoint constructive, positive health education becomes more and more important, necessitating a change or modification of the view of the professional man, including the doctor. A demand for education is beginning to be evidenced by the public. This demand will grow if the selected stimuli are supplied. There are enough organizations interested in the problem. The State is anxious to foster and encourage. It is up to those most thoroughly health conscious to lead the others to a health education commensurate with worthy home and community membership. In a word, to select and supply the stimuli."

Quotation from Sup't. McManus

A few generations ago schools did not concern themselves with the health of the pupils. That was a matter which was left solely to the parents until the prevalence of a disease had reached the proportion of an epidemic. Then the community assumed control and dischargd the duties pertaining to health indifferently well. During the last twenty years the schools' responsibility has undergone a decided change. Schools are now doing everything, within reason, which their finances will permit, to safeguard the life and health of the pupils. They are now trying to turn out healthy, happy children, well started on the path of successful adaptation to their environment and to the rules of civilized life. Education, in its broader sense includes instruction as to proper diet, proper conduct, proper use of one's mind, body and emotions to the end that a healthy body, a healthy mind and healthy morals will be adequately built up and maintained.

The schools are interested in the physical well being of the children from the standpoint of efficiency and attendance. The advent of the public health movement has greatly reduced the number of absentees and the efficiency record of those in attendance has been greatly enhanced. The annual scourge of

contagious diseases is now practically eliminated. The close cooperation of the teachers and school officials with the Health department enables the physician and nurses to detect the contagious disease in its incipiency, thereby enabling them to isolate such children and prevent the spread of the germ. The examination of pre-school children by physicians to detect correctable defects now throws some of the burden on the parents, to see that those defects are corrected before the child enters school.

While a complete plan of Health Education resolves itself into three distinct, but closely related phases, health service, physical training and recreation; it is with the first of these that we are particularly concerned today. A Department of Health is necessary to stimulate health activities and to speak authoritatively, through its physician, on matters pertaining to the health of the community and especially that of the children. It should and does plan a program of health, formulates rules of right living, and constructs a workable syllabus for the inspiration and guidance of the teachers. However, the Superintendent and teachers must help to put it into effect. It is the class room teacher, cooperating with the parents, who does the actual effective work in health education. A knowledge of virtues does not insure their practice; neither does a knowledge of health habits or rules insure their observance. Teachers must do everything in their power to induce the pupils to practice the rules of right living and to thoroughly master those health habits which are designed to protect their health and prolong their lives.

Prevention is the most effective health work that can be done for the welfare of the community. It is really a composite problem of the home, the school, and the community and must be solved through their cooperation. They must make use of what science has found out for the prevention of sickness and the spread of disease, and every thing possible to get the children and parents in the right attitude toward health education. When fully awake to the dangers of infection, parents and pupils will work, with teachers and physicians, in an effort to ward off disease. Teachers must work with the health department to get the idea across to the parents and children, that certain diseases are caused by germs, which may, by precaution, be prevented from getting into the system.

Before teachers can do very effective work in health education, they should have a knowledge of what science has to offer for the development and maintenance of health. They should know the rules of health and have formed the habit of right living. Teachers' colleges should make health education a major subject, and then give to every prospective teacher a workable knowledge of such health rules and health habits as should be taught to pupils in elementary schools. In the meantime, through the influence and efficient work of health departments, teachers may and are being taught to realize the importance of health education and induced to master much of the knowledge pertaining thereto. They are becoming better acquainted with correct habits of living and instinctively help their pupils to set up and observe such habits.

Until our teaching force has more completely mastered the necessary scientific information for health education; until they practice rules of health habitually, and until instruction in health education can be done instinctively, a special period on the program must be set aside for instruction and drill on health education. I do not mean to infer that the time will ever come when incidental instruction on health will suffice, but I do mean to say that we can never do effective health work in any one period a day scheme. Much of the health instruction should be incidental and spread over the entire day. Now, the teacher must see that the pupils get the necessary correct information during that period, either from the text or through a series of talks. The teacher must see to it that proper health habits are firmly established by appropriate practices. To do this, she will have to secure, so far as possible, the good will of the pupils and the cooperation of the parents.

Teachers need never be so busy that they cannot spare the time to inspect the hands, the faces and eyes of the pupils for cleanliness and for signs of communicable disease. By giving close attention to all common colds and coughs, teachers are able to detect the sign before the cold is actually developed. By regarding every cold as a possible beginning of a contagious disease, some children are required to remain at home a few days, thus insuring a speedy recovery and preventing the possible development and spread of disease germs. Experience has taught us that children having severe colds or coughs can do very little effective work in school. But if such children remain home a few days, a complete recovery will be effected and the child will be just as far advanced, in his school work, at the end of the week as if he had remained in school every day, hampered with the prolonged cough or cold.

A child's conduct, character, and mental attitude is acquired very largely from the environment in which he lives. To bring about the necessary change in attitude and mode of living, the teacher must not only be sure of her facts, be concise in her statements, but she must be very tactful so as not to reflect discredit on the parents and the home life of the children. It is more what a teacher is, than what she says. She should exemplify health in her daily work thus encouraging the pupils to attain the good health standard which she has set. Many of the parents are poorly informed on such matters. Even some educated, well meaning parents have very erroneous ideas as to what their children should eat, as to what they should wear, and also the amount of sleep and rest necessary for healthy growth and development. While we cannot hope to have a dietitian in every school, we are encouraged to hope that most teachers will have sufficient knowledge of the proper kind, and the several varities of food that children should eat and have at least an elementary knowledge of how such foods should be prepared. If the teacher is tactful and gives out such information, at the right time, couched in language easily understood by the pupils, the parents

will be gradually educated and influenced through their children.

Much effective work is being done in school today in the promotion of health by the school nurse, who goes to the homes, or perhaps deals with the pupils individually, and sets up, through intelligent advice and supervision, habits of good living.

It may be entirely too ambitious, yet I like to hope that the time may come when according to Professor Sutton, public health authorities, cooperating with the schools, shall succeed in instilling into the minds and hearts of the rising generation the idea that they are the bearers of the life and health of the race. They must be led to realize that since they are but the temporary bearers of the life stream they must guard it with the greatest care, so that they may enjoy life to the utmost and pass it on unimpaired to the next generation.

SOME OBSERVATIONS ABOUT THE TREATMENT OF UTERINE FIBROIDS AND THE BLEEDING OF THE MENOPAUSE*

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This paper was prepared, after a number of years of experience in the field of x-ray therapy, because it seemed to me that the x-ray treatment of bleeding of the menopause and of fibroid tumors gave excellent results. A careful check of our cases, some two hundred in number, confirmed these impressions. The results in carefully diagnosed cases are such as are obtained but rarely in any field of medicine. Nothing said in this paper should change the fact, that x-ray treatment of these cases must not be attempted until a most careful gynecological examination, using every method at one's command, has assured one that the diagnosis is correct.

In any article on the treatment of these conditions, certain contraindications are sure to be found. Inflammation of the adnexa is always used, as are the size of the tumor, sarcomatous degeneration of the myomata, and carcinoma of the body in both menopausal bleeding, post-menopausal bleeding and in the myomata. Each of these will be taken up later. May I say that with some qualifications, which I will make, none of these need be considered as a definite contraindication in the average routine of cases.

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We will first take up what surgery, the accepted treatment in America, has to offer. In tumors, both carcinomata and fibromata, it removes the disease; in the bleeding case it removes the symptoms and preserves the ovaries for future function. It assures the patient, except in malignancy of the body of the uterus, she will be well and in the latter type 50 to 60 per cent. will be cured. This surely appears at first glance to be a panacea, but what are the costs?

Discussions are still in progress where no malignancy is known to be present as to whether a total or a sub-total hysterectomy should be done. I have no doubt that in most of the larger hospitals either a total hysterectomy or some form of operation that removes the mucosa of the cervix is done, but in many hospitals, in the hands of many operators, these operations are not done because they carry a high mortality. Published statistics of some of the larger hospitals, such as St. Luke's in New York City, quoted by Wood, give an operative mortality of 1.5 per cent in 1,000 cases. The Mayo Clinic reports for 1931, where 473 cases are reported, 287 total and 186 sub-total with 11 deaths, or 2.3 per cent mortality. Many published reports established these figures as correct for the best surgeons, but I have knowledge of a number of good institutions, where it runs as high as 5 per cent. So we will grant that surgery removes the disease, but at a conservative mortality of over 3 per cent.

Now, if, as I believe, in many places because of various reasons, the cervix is left in, we have to add an additional mortality, the amount of which I know no way to compute, as I could find no collected statistics. This is the mortality that follows malignant degeneration of the retained cervix. In the last 150 cases of carcinoma of the cervix seen by me, in which the records are complete, 11.8 per cent were in retained cervices. You may say, that this is due to poor surgery, but these cases are from a number of different men in an average community. Five of these cases did develop the disease within the first year, showing lack of careful diagnosis, but the remainder of the cases show periods varying from two to six years. I admit that the percentage of carcinoma in this series is very high, probably due to the small number of cases, but still it seems

to be a factor, which should not be neglected when any form of treatment is considered. Carcinoma of the retained cervix is almost always fatal.

Another factor is sexual disfunction. Few surgeons but have had at some time or other women under fifty years of age, operated upon, a complete hysterectomy but without oophorectomy done, the sexual function active, with inability because of mechanical factors, to satisfy these desires. In other cases it is the husband, who complains. This subject has not been given enough consideration in the literature. It is an important one. Careful questioning about the sexual function in patients x-rayed elicits, that there is little change after the treatment. The sexual organs undergo the normal atrophy of old age, the process does not seem to be hastened, so that several years of gradual change occur. While this may not be ideal, it is better than the results obtained when these functions are suddenly stopped by surgery. There are enough neuresthenic patients about now. This class should not be augmented.

Now for a few of the more often mentioned contraindications to x-ray. First, pelvic inflammatory disease. This was long considered as a definite contraindicant, but of late years voluminous literature about the treatment of inflammation with the x-ray, mostly in the foreign journals, has appeared.

Tamdarow, in an article on "The Treatment of Fibroid Tumors" in Strahlentherapie, gives pelvic inflammatory disease as one of the indications and says this condition disappears along with the tumor. Other European authors mention it, and Desjardins, in *The Journal A. M. A.*, 1931, reviews the entire subject of x-ray treatment of inflammation. He refers to Gambarow, who treated 123 cases of adnexal disease with good results. Desjardins admits he is not sure of the mode of action of x-ray, but thinks it is on the lymphocytic infiltration. He adds that after careful observation, he has never seen an inflammatory case made worse by treatment. This has been our experience with cases of chronic inflammatory disease. I have never treated, nor have I seen any reference in the literature to the treatment of acute conditions. It is my opinion that part of the good effects are due to a gradual reduction of the blood supply, both from the direct effect of the ray upon the infected tissue and the results of the effect upon the ovary. These things are particularly important to know because it is in these chronically infected, adherent cases that the post-operative accidents occur.

The matter of very large tumors is most always mentioned in the literature. Our experience has been, and I am sure that it has been the experience of all radiologists, that mere size is no contraindication, as many times these tumors respond better than the small, more dense tumors. If the tumor contains calcified areas, these areas may be demonstrated roentgenologically, and, of course, surgery will have to be used, but in the greater number of cases this contraindication will not be present and therefore size has been disregarded in practice by most men, who treat these cases with satisfactory results.

Another contraindication and the one most frequently mentioned, is sarcomatous change of the myomata. There is great divergence of opinion in the literature as to the frequency of these cases. Lynch showed 4.6 per cent present in 683 cases. Kaufmann in his text-book on pathology says it is most common in the submucous type and quotes Evans as having found it in 1.8 per cent of 4,000 operative cases. Wood, after examining 1,000 cases, gives no percentage, but says it is rare.

The following is a quotation from Corscaden and Stout, 1929: "A very extensive resume of this whole period was made by Piquard in 1905. Between the years 1857 and 1905 reports on 127 cases of sarcomatous degeneration, including 5 of his own. Of these the diagnosis was based upon morphological evidence alone in 103. Of the remainder, 4 must be discarded because of doubt as to whether they are sarcomata or carcinomata. Eight were found to have invaded surrounding structures, 15 recurred after removal and in 8 there was metastasis. Therefore in this forty-eight year period, a compilation covering the literature of eight countries, contains records of 31 proved malignant sarcomata of the uterus.

Four years later Kelly and Cullen, 1909, published another elaborate investigation. Among over 1,400 myomata of the uterus, there were 17 which they considered showing morphological evidence of being sarcomata.

An analysis of these reports shows that there was proof of malignancy in but 7; i. e., 2 recurred locally after hysterectomy, 3 showed apparent invasion of the neighboring tissues and 2 had distant metastases. On the other hand, a few of the 10 cases for which there exists nothing but morphological evidence that they were sarcomata, have remained well several years after operation.

In 1920 the results at the Mayo Clinic were studied by Evans. He found that from 1906 to 1918 inclusive, a period of thirteen and a quarter years, there had been 4,000 operations for uterine fibromata. Seventy-two of these had been previously reported as being suspicious or malignant, but only 11 proved to be so by recurring locally and invading the peritoneal cavity. Using his criterion only 13 cases were histologically malignant. This gives us a figure of 0.39 per cent of all fibroids removed by operation, which are malignant. This corresponds very closely to the figure 0.5 per cent obtained by Kelly and Cullen of proved malignant neoplasms among the fibromyomata.

A few years ago it began to be the fashion for pathologists and gynecologists to examine series of fibromyomata removed at operation for evidence of sarcomatous degeneration and the results were startling. Warner, 1917, and Miller, 1913, found that about 2 per cent of all myomatous uteri showed sarcoma. Geist, 1914, while examining 250 myomata found that 4.8 per cent of them showed sarcomatous change. Spencer, in discussing a presentation of 2 cases of sarcoma of the uterus by Andrews, 1921, stated that he had found sarcoma in 6 per cent of all cases of myoma and that Bumm put the figure as high as 12 per cent. Because of this he now did total hysterectomy for myomata. All of these reports are based upon morphological changes and in few apparently has an attempt been made to find out what happened to the patient after she left the hospital.

If the observations of these writers are correct, then a considerable number of women who have retained myomatous uteri are afflicted with the disease, sarcoma of the uterus. If this is a malignant neoplasm, we should be able to find autopsy records of such cases. In Bellevue Hospital, New York City, there are none recorded among the autopsy protocols, while there are only 3 cases, reported in this paper, at Presbyterian Hospital, New York. At the Boston City Hospital in 1917 there was recorded only 1 case, which was studied by Gardner. He noted that of 827 myomas examined at the hospital, 24 were histologically malignant, but this was the only one in which the growth had metastasized. It may be argued that hysterectomy has cured many of these women, but if this is true, why have we such a dearth of autopsy records of women dying of sarcoma of the uterus in the days before hysterectomy for fibroma became such a common practice.

One cannot escape the impression that although an appreciable number of uteri may be found in which histological changes have occurred, exactly similar to or closely resembling the changes found in proved malignant neoplasm arising in fibromyomata, only a small proportion of these are actually malignant themselves. One cannot say what the proportion of malignant neoplasms among histological sarcomata of the uterus is, because seemingly no one has seen enough cases and allowed them sufficient length of time. Our impression is that the figures of Evans are very close to the truth and that only about two-fifths of 1 per cent of all fibromata are malignant.''

The reason for these divergent opinions, of course, is not hard to find. It is in the difficulty of determining from the cell morphology, when malignancy has developed. Ewing in his textbook makes the simple statement that diagnosis is difficult, so, with the number somewhere about 0.5 per cent of the observed cases and the statement of Ewing that 50 per cent of all women over fifty years of age have these tumors, the facts bear out our experience, that clinical sarcoma of the uterus is a rare disease. Nevertheless it should be thought of and a rapidly growing tumor should be viewed with suspicion, but sarcoma of the uterus is not an indication for the use of surgery in the great majority of cases.

The last of the most usual contraindications to the x-ray treatment of uterine myomata is its association with carcinoma of the body, with the variation of opinion of frequency of myoma ranging from 20 per cent in some authors to 50 per cent in others. The coincidence of the two conditions of necessity would be strik-

ing. I have seen no report of statistics of a series of myomata operated upon, which gives the number of cases of carcinoma of the body found. Its frequency with regard to the entire series cannot be estimated. Of the many thousand cases reported, following the roentgen ray treatment, there are also no figures to tell us how many afterwards developed this disease.

There are a number of articles analyzing series of cases of carcinoma of the uterus with the relative frequency of carcinoma of the body to carcinoma of the cervix and here again the variation is marked. Stacy of the Mayo Clinic says carcinoma of the fundus and carcinoma of the cervix appeared in a ratio of 1 to 3.4 in a series of 855 cases of carcinoma of the uterus, reported by Maley in 1909. Cullen reported carcinoma of the fundus in 25 per cent of 176 cases of carcinoma of the uterus and Graves 22 per cent in 555 cases. In most of the early text-books it states that carcinoma occurred in the cervix eight or ten times as commonly as in the fundus. Keene and Kimbrough found it in 1.6 per cent of 254 cases. Carcinoma of the fundus has been considered a disease of the post menopausal life, but as in cases of carcinoma elsewhere in the body, recent studies show a greater incidence in younger people than was shown in earlier reports. In an anlysis of cases at the Mayo Clinic, between 1907 and 1924, 21 per cent of women with carcinoma of the body were below fifty years of age and 10 per cent were below forty-five years of age.

Curtis F. Burnham says: "The ratio between two groups of carcinoma of the cervix and carcinoma of the body in our records is 1 to 14. Old age is a predisposing cause. Patients with uterine body cancer are much older on the average than those afflicted with cervical, ovarian or other gynecological carcinomata. In 165 patients in this group treated in the clinic of Howard A. Kelly Hospital the average was fifty-seven years. In the literature there occurs frequently the statement that cancer of the uterus is much more frequent in women with fibroid tumors and those suffering from sterility and those who are unmarried. Without accurate information as to the percentage of fibroids in all women, of sterility in all married women and of spinsterhood, a small group of cases is of limited value in throwing light on the importance of these factors. However, my impression is that they have little, if any etiological significance."

D. C. Norris and Voit in 115 cases observed this complication in 21 per cent. Uterine fibromata are much commoner in negroes than in whites, but apparently body cancers are much rarer. The reverse should be the case if fibroids cause or favor cancer. Sterility does seem to be a predisposing cause, or at least an associated condition. In 127 records this question was clearly taken up and there were 58 women who had had children and 69 who had had none. In these women there was, therefore, 55 per cent sterility. All of them had been married for years. Most of those who had had children were multipara, the largest number of children in one case was 16.

With a divergence of opinion of from less than 1 in 4 of one series, to 1 in 14 in another, it is hard to arrive at definite conclusions. In our own series of 200 cases of fibroid tumors and bleeding, carcinoma of the body has been present clinically in only 2 cases. One case was curreted by a competent surgeon and the scrapings examined with a negative diagnosis. Bleeding in women, with or without myomata, after the menopause, should always be regarded with suspicion and one should consider it malignant until proven otherwise. Careful clinical examination with diagnostic curretage will help us from the bad results that follow delay in these cases. However its relative rarity, the ability to diagnose it preoperatively makes me feel that it is not an important consideration in most of these cases.

This paper is based entirely upon the use of x-ray in the treatment of these conditions. The intrauterine use of radium is still contraindicated in several of these conditions. The type of radiation used in these cases is a single series of high voltage x-ray, 200 kilovolts, 1 millimeter copper at 50 centimeters distance, with approximately two-thirds erythema dose given in three sittings, one sitting every other day. Four areas are used, one anterior, one posterior and two laterally, the size of the fields being 15 by 15 centimeters. There has been in our experience no occasion to repeat

this dose to cause a complete cessation of menstruation. There is little or no effect upon the skin. In some cases the pubic hair disappears, but soon returns. The fields are so distributed that the radiation includes the entire pelvis. Many times I have heard it described as being absolutely necessary to use radium for a quick cessation of the bleeding. This is not always necessary. I have seen patients with severe hemorrhage and marked anemia, cease to bleed following the application of one single dose of this type of Roentgen Ray therapy. Following the above treatments, the patient may menstruate once at the normal time for the next period and there may be a small amount of bleeding at second period. It is unusual to have more than this. The results have been extremely favorable. This treatment can be carried on in most cases in an ambulatory manner, it requires no hospitalization unless the previous condition of the patient demands it. The menorrhagia is usually controlled within a few days and the patient begins to gain in strength and weight. The percentage of disappearance of the tumors has been very high. It is, however, useless to expect a tumor of large size or of a marked consistency to disappear within a very short time. There is almost immediate alleviation of the symptoms, but the tumor itself may remain for some time. Some of these tumors have taken from six to nine months to entirely disappear. Occasionally, a tumor, not very large or of markedly hard consistency will not entirely disappear, but the patient's symptoms are alleviated and they are no worse off than many patients with fibroid tumors, small in size, who have never known the presence of the tumor. Careful follow up of these cases should be the rule. Continuation of a uterine discharge, return of bleeding, are symptoms that should not be neglected and if subsequent surgery is needed, the patient will be in better general condition to stand the operative procedure, and if malignancy is present, they will have received a good preoperative radiation, which will have a beneficial effect on the prognosis of the case.

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DISCUSSION

Dr. Harold Swanberg, Quincy: There is very little that I can add to Dr. Murphy's splendid presentation except to confirm practically everything that he has said.

We have been treating uterine fibroids with x-ray and radium over a period of fifteen years and our experience has been practically identical with that of Dr. Murphy. I am strongly of the opinion that the general profession does not appreciate what can be done with radiologic methods in the control of these cases. Certainly the average patient would greatly prefer not to undergo an operation if she can have some assurance that she can be relieved of her symptoms without surgery.

I think that the tendency of physicians to immediately tell patients that nothing can be done except a surgical operation is one of the things that drives many patients into the hands of quacks. Here in organized medicine we have a method at our command by which we can give these patients a great deal of relief without surgery and I think that we should utilize it.

Just as in any other branch of medicine this treatment requires skill in its administration, because x-ray therapy, although painless, is not a Christian Science method of treatment. In utilizing x-ray or radium in any form, you are utilizing a very powerful agent and it must be directed carefully, specifically and with a definite purpose.

I do think that many of these cases, especially the smaller forms of fibroids, can be treated successfully with radium. Dr. Murphy did not mention this because he was speaking upon the efficacy of the x-ray alone.

Dr. John Murphy, Toledo, Ohio (Closing discussion): I just want to stress two things. You cannot do this work unless you have a careful diagnosis. I am not trying to discard the surgical methods. Surgery is imperative in some cases, the method of choice in others, but it is not the only method, nor always the best method. Another thing is careful follow-up. The tendency in some places is to consider the roentgenologist just as a roentgenologist. You must remain a physician. You must follow up the patient and you must know gynecology. If you do these things, your results will be good.

This is a great age of convenience when one gets his food from cans, sermons by radio, and babies from foundling asylums.—*Ohio State Journal.*

Young Harley Glace thought he would race
The Choo-Choo for a thrill.
For quite a space he set the pace;
He met the Choo-Choo face to face—
And sleeps on yonder hill!

Salome, the first woman to discover the relation between gauze and effect.—*Blue Baboon.*

EXOPHTHALMIC GOITER IN CHILDREN#

LINDON SEED, M.D. AND HENRY G. PONCHER, M.D.*
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True exophthalmic goiter is rare in children below the usual age limit of 12.[1] There exists however, a group which clinically simulates this disorder and to which is applied the terms hyperthyroidism and abortive types of Graves' disease. Patients of this type are often cited as cases of exophthalmic goiter that respond to medical treatment. The condition is found mostly in girls between the ages of 8 to 15. These children are nervous, emotionally unstable, complain of headache and cardiac palpitation on exertion. They are usually above normal height for their age, have slightly enlarged thyroids, rapid heart rate, slight staring expression of the eyes and their hands are constantly moist. These cases for the purposes of reference will be termed the functional group. Should this group be classed as true exophthalmic goiter the incidence of the disease in children would be more common than previously recognized. The diagnosis of exophthalmic goiter from the surgeon's point of view concerns itself primarily with the question whether the enlargement of the gland is purely a local affection or whether it is producing a toxic constitutional state. In other words, are we dealing with a functional disorder incident to puberty and its attendant physiologic stress or a definite hyperthyroidism associated with thyroid hyperplasia?

In this study two types of cases were observed. They were distributed in the following age groups:

Exophthalmic Goiter		Functional Group	
Age	Number	Age	Number
11	1	9	2
12	3	10	2
13	2	11	4
14	4	12	4
15	2	13	4
16	4		

The 16 cases of exophthalmic goiter in children reported were selected from 631 consecutive cases of exophthalmic goiter seen during the past few years. In some of the other series reported in the literature Sattler[2] reported the largest. In 3,477 cases of exophthalmic goitre he found 184 children of the age of 15 or under. Helmholz[1] reported 30 cases in 3,432 patients with the disease and in a recent report by Greene and Mora[1] there were 26 cases in children out of 1,200 cases of exophthalmic goiter observed. It is significant to note that in the two most recent reports by Helmholz and Greene and Mora only 19 cases were below the age of 12 out of a total of 56 children with the disease.

The diagnosis of simple goiter is rarely difficult in the patient in whom thyroid enlargement is the sole clinical feature. In children between the ages of 8 to 15, cases are encountered who exhibit symptoms with thyroid enlargement. Correct diagnosis is of paramount importance as statistics show that the peak of incidence of exophthalmic goiter in children also occurs at puberty. The symptoms of exophthalmic goiter in children do not differ materially from those seen in adults. For diagnostic consideration they may be grouped under the following six headings:

1. Persistent tachycardia with elevated blood pressure and pulse pressure.
2. Nervousness and tremor.
3. Enlargement of Thyroid (with a local bruit).
4. Exophthalmos.
5. Loss of weight and strength in the presence of a good appetite.
6. Increased basal metabolic rate.

All of these symptoms, with the exception of exophthalmos can occur in other diseases,—chorea, tuberculosis, rheumatic heart disease and functional disturbances. It is only after a careful consideration of the character of these symptoms that one can arrive at a conclusion.

1. Tachycardia with the qualifications that it be persistent and associated with an increased pulse pressure is quite charateristic in the true case of exophthalmic goiter. The pulse rate in children is usually extremely rapid. In fact, there is considerable doubt if one is justified in making a diagnosis of exophthalmic goiter in a child when, without treatment, the pulse rate is under 100 per minute. It will more likely to be above 130 and remain persistently rapid day in and day out. The systolic pressure is usually elevated and even in children it is rare to find a systolic blood pressure below 120. The pulse pressure, which is roughly proportional to volume output of the heart

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*From the Departments of Surgery and Pediatrics, College of Medicine, University of Illinois.

per beat, is increased. This accounts for the forceful pounding of the heart and violent pulsation of the carotid vessels. Systolic murmurs are often encountered. In one case there was a diagnosis of organic disease, and in two others an erroneous diagnosis was made of a concomitant valvular disease. In the functional group these symptoms were present but in a milder form. This can be seen from the following figures of the two groups in which average readings of the children with exophthalmic goiter are compared with the average highest single finding of the functional group:

1. Exophthalmic goiter (16 cases)
   Pulse Rate.....134 per minute
   Blood Pressure.....135/62
2. Functional Group (16 cases)
   Pulse Rate.....116
   Blood Pressure.....113/60

From these facts we feel justified in making the assertion that a child with a systolic blood pressure under 120 mm. or with a pulse rate under 120 per minute is not likely to have an exophthalmic goiter.

2. Nervousness is very pronounced, especially of the objective type, in both groups of cases. Those with exophthalmic goiter however show this symptom to a marked degree. In these patients it appears suddenly along with other symptoms in a previously normal child. The child laughs, cries or becomes frightened on little provocation; he is seldom quiet, moves about rapidly and frequently. The restlessness is so marked and the movements are so numerous that in some of the patients a diagnosis of chorea had been made. In the functional group nervousness was likewise a constant complaint and a number evidenced a similar type of restless activity. These children, however, gave an almost life-time history of nervous instability whose reactions varied from day to day and were definitely influenced by external factors. The presence of tremor is of little diagnostic value as a single symptom. It was present in both types of cases although possibly more marked and more constant in the patients with exophthalmic goiter. Although the symptom has little differential value as an isolated manifestation nervous overactivity is so pronounced in children that one can be reasonably sure that an objectively quiet, peaceful child does not have exophthalmic goiter.

3. The presence of a goiter in a child from this region is of little aid in the differential diagnosis.[3] Since, however, a palpable goiter is one of the cardinal findings of exophthalmic goiter, occuring in about 90% of cases, one should be hesitant in making such a diagnosis in the absence of a definite enlargement of the thyroid gland. In all of our cases of exophthalmic goiter there was a distinctly palpable, firm, gland. In the functional group an enlarged thyroid was likewise a constant finding. Sometimes the character of the gland is of assistance. A very soft diffusely enlarged thyroid, the type that was seen in the functional group is usually non-toxic; a gland which is firm or hard with the characteristic granular uneven surface is usually hyperplastic and toxic.

A bruit over the superior poles providing one is sure it is not a carotid bruit or a venous hum is helpful. In the 16 cases with exophthalmic goiter, 12 had a definite bruit. In the Helmholz series 70% had bruits. The incidence of this sign is much higher than one finds in adults. In the functional group there was only one patient with a bruit and this was questionable.

The administration of Lugol's solution to a patient with exophthalmic goiter not infrequently causes the gland to increase in size and firmness. As far as we can learn this phenomenon occurs only in the gland of exophthalmic goiter. In one of our cases the production of a larger and much harder thyroid in the third week of lugolization was one of the deciding factors in the diagnosis. In other cases it was of considerable value.

To be of diagnostic value the general improvement under Lugol's solution must occur within a week to ten days. Under continued observation the patient with exophthalmic goiter gives definite evidence of the diagnosis while the child in the functional group runs more or less of an uneven clinical course until puberty is established.

4. Although exophthalmos may exist in rare instances without thyrotoxicosis one is more or less forced to accept the dictum that a patient with bilateral exophthalmos has exophthlamic goiter. The greatest difficulty has been in determining when exophthalmos actually exists. Differences of opinion on this point are very common. The various eye signs are of little

value in the questionable cases. The stare usually precedes the protrusion and there is but one constant characteristic of the stare. That is the elevation and retraction of the upper lid. Normally the upper lid lies below the level of the iris. When a definite stare is present the lid is retracted so that the white sclera shows between it and the iris. In our 16 cases with exophthalmic goiter, 13 had definite exophthalmos. This is a higher percentage than seen in adults but compares with the incidence in children as quoted by Greene and Mora and Helmholz in which exophthalmos or stare occurred in 80% of their cases. It is so frequent a symptom that we are of the opinion that the diagnosis of an exophthalmic goiter in a child is doubtful in its absence. In the functional group of cases a staring expression of the eyes may be mistaken for the classical sign.

5. Loss of weight and strength can occur in many diseases but in only two is it associated with a normal or increased appetite, namely, diabetes and exophthalmic goiter. In none of our cases of exophthalmic goiter was there a loss of appetite. In 10 cases the appetite was increased and most of the children could not be appeased despite a large food intake. In 5 cases the weight loss averaged 20.6 pounds in 2 to 3 months in spite of a good appetite, a finding which itself is sufficient to suggest the diagnosis. The other cases of exophthalmic goiter had only a few pounds weight loss and in 2 cases there was a gain in weight.

The latter event does not occur, however, unless the food intake is above the energy requirements and this usually occurs in hospitalized cases where quantitative diets can be efficiently instituted. Digestive symptoms are uncommon and even the gastro-intestinal crisis consisting of anorexia, vomiting and diarrhea seen in the adult patient seems to be very rare. In the functional group all 16 children had anorexia or perverted appetites. No child in this group had a weight loss over 5 pounds and a more characteristic finding was a stationary weight. Gastro-intestinal symptoms were not observed except in a few instances where the children were forced to eat by their parents.

The loss of strength is rarely a presenting complaint in children but it can be easily demonstrated by the method of Plummer in having the child step up to a low chair. One is often surprised to find that an apparently active child with exophthalmic goiter is unable to raise himself more than a few inches. The profound weakness of the quadriceps muscle was of great value in a few cases simulating chorea. It however, has its limitations, for in the functional group of cases fatigue was a common complaint and in these cases quadriceps weakness was part of general muscular fatigue.

6. It is difficult to speak with scientific accuracy regarding the determination of basal metabolic rate in children. Besides the difficulty in obtaining results under true basal conditions, variability of methods and lack of agreement on normal standards add to the problem. Under these circumstances reports on basal metabolism must receive individual consideration. Probably the most satisfactory results are obtained in hospitalized patients where more than one determination is made. The standard for children in most common use is that of Benedict and Talbot. The period around puberty however deserves special attention. Many investigators have believed there was a rise in basal metabolism during puberty. A recent study by Dr. Topper of Schick's Clinic[4] is particularly significant. She found an increase in basal metabolic rate in the prepubescent period, reaching its maximum around the time when menstruation was established in girls and sexual maturity in boys and that it declines afterward. The height and duration of increased metabolism varied in each case. Some of the children had no other symptoms. Others presented such symptoms as enlarged thyroid gland, tremor, nervousness, vasomotor instability, cardiac murmur and tachycardia. As a result of her observations she regards increased basal metabolism as physiologic during puberty and that this rise coincides with the physiologic rather than chronologic age. This explains the earlier rise in girls. It also explains the results she obtained in a study of the basal metabolic rates of diabetic children.[5] In this group of girls the elevation of metabolism did not occur until the ages of 15 to 16 years. This was coincident with the onset of their menstruation and it is well known that catamenia occurs later in diabetic girls. Basal

metabolic rates therefore must be interpreted in light of several factors. In 16 patients with true exophthalmic goiter 12 had basal metabolic rates above 30. In the remaining 5 the clinical evidence of increased metabolism was so definite that in spite of relatively low readings the diagnosis was never in doubt. In the functional group only two children had a basal metabolism as high as 30 in any of the determinations and even in these instances it did not persist. Clinically, the pulse rate, heat intolerance, perspiration and nervous fatigue was not as marked as observed in the children with exophthalmic goiter.

SUMMARY

Exophthalmic goiter is a rare disease in children below the usual age limit of 12. The peak of incidence occurs about the age of puberty at which time functional changes occurring at that period may be mistaken for exophthalmic goiter. The differential diagnosis has been discussed under six headings:

1. Persistent tachycardia with elevated blood pressure and pulse pressure.
2. Nervousness and tremor.
3. Enlargement of Thyroid (with a local bruit).
4. Exophthalmos.
5. Loss of weight and strength in the presence of a good appetite.
6. Increased basal metabolic rate.

An attempt has been made to evaluate their diagnostic importance. The statements are based on personal observation of 16 cases of each group and the observations of some of the most recent reports on this subject. The cases of exophthalmic goiter presented were from 546 consecutive cases seen during the past few years.

Diagnosis is stressed in this discussion because it is obvious that it is the most important prerequisite in successful treatment.

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DISCUSSION

Dr. E. M. Stevenson, Bloomington: I should like to take this opportunity to congratulate Dr. Poncher on his very splendid presentation.

Exophthalmic goiter in children has always occasioned considerable interest because of its comparative rarity and because of the problem which it presents for management.

Drs. Billeby and Carlton, of New York, have recently, in a series of 1600 cases from their own clinic, proved only 6 before puberty. They found in the literature 8 cases more. Of the total 14 cases so reported of proven exophthalmic goiter, 6 were three years or under. Dr. Poncher has mentioned 3432 cases as described by Dr. Helmholz. Of this number 30 were proven exophthalmic goiter—26 were girls and 4 boys—all under 14 years of age. This series covered a study period of 5 years. The condition is rare up to the age of puberty, the incidence increasing as we reach the age of 10 to 15 years.

The symptomatology and course of the disease together with the pathology is essentially the same as in adults. The toxicity due to age, aggravates in many children, the symptoms.

The adult with exophthalmic goiter has had opportunity to undergo natural development and growth. The condition in children progresses rapidly, and since these children need thyroid for normal growth and natural normal mental development, early recognition is not only desirable but necessary if management is to be beneficial.

When we consider the etiology of exophthalmic type of goiter, we are considering a debatable question. Heredity, environment, foci of infection, acute infectious disease, and neurogenic imbalance all have their advocates. I should like to call your attention to the fact that the rather universal use of iodized salt in our homes, together with the indiscriminate use of thyroid as a prophylaxis in school children may have a great deal to do with this condition which we find arises more frequently than was previously supposed.

Since all forms of goiter with the exception of the exophthalmic type are due to iodine deficiency, the treatment is obviously prophylactic. For the already active case of exophthalmic goiter the discriminate use of Lugol's solution over rather long periods of time followed at the proper period by surgical intervention is necessary.

Dr. Lahey, of Boston has reported several cases where two stage operations were done believing that there was less shock to the nervous system in these neurogenic imbalanced children and that the crisis which arises as a result of surgical intervention was very much lessened.

I should like to ask the essayist the mean metabolism

rate in these children and what he found with reference to their treatment as regards the use of Lugol's solution.

Dr. M. H. Streicher, Chicago: I should like to ask Dr. Poncher if the diarrhea that he speaks of in this group of cases is present only in the male or female, and just how that diarrhea is controlled, whether it is better controlled by the iodine preparations or by a suitable diet and what that diet is.

Dr. Willard O. Thompson, Chicago: I should like to support the statement about the difficulty of diagnosis, which may be attributed largely to the difficulty of getting accurate determinations of the basal metabolism; and that, in turn, is largely the result of poor metabolic standards in children.

It, of course, has been recognized for years that exophthalmic goiter is rare below the age of puberty; the greatest incidence is between the ages of 15 and 40.

It was not quite clear to me what was meant by the functional group, and it also seems to me that there is a tendency to discuss exophthalmic goiter in children as if it were quite distinct from exophthalmic goiter in later life. Exophthalmic goiter is exophthalmic goiter, regardless of the age at which it occurs: furthermore, in my experience there is no reason to believe that the treatment of the disease in children should differ from that in adults.

One often reads reports in the literature to the effect that exophthalmic goiter tends to disappear spontaneously more readily in children than it does in adults. In my experience, the disease lasts just as long in childhood. Roentgen-ray treatment is usually unsatisfactory for the same reasons as it is in adults. Prolonged treatment with iodine works in about the same percentage of cases in children as it does in adults. Exophthalmic goiter in children is at present best treated by thyroidectomy, just as it is in adults. The only reason for caution is the great importance of the thyroid gland in a growing individual. In the average surgical clinic sufficient thyroid tissue is left at the time of thyroidectomy to prevent the development of myxedema in most cases. In the few instances in which myxedema develops, it can be adequately controlled by desiccated thyroid. In other words, the main point that I wish to make is that exophthalmic goiter is essentially the same in childhood as in later life and presents essentially the same therapeutic problems.

Dr. W. W. Kuntz, Barry, Illinois: It is hard to differentiate exophthalmic goiter from chorea and endocarditis, because of the nervousness, and tachycardia one finds in these children.

A year ago I had a case in a girl aged eleven convalescing from measles, who with a slight elevation of temperature developed a very rapid heart with a slight reduplication of the second sound. I first thought I had a case of endocarditis to deal with, but by watching it over a few weeks I concluded that it was a case of toxic goiter. I hesitated to make that diagnosis until I had inquired of several of my colleagues whether or not they had ever seen a case in a child of that age. Though I had no basal metabolism test made every other symptom conformed with that of toxic goiter, and I finally regarded it as such.

Under rest and Lugol's solution she eventually made what I regarded as a good recovery. Just recently, however, under strain of final examinations she has developed an increase of nervousness, and a renewed tendency to rapid heart action.

Dr. E. L. Jenkinson, Chicago: I did not intend to get up and take part in this symposium, but being a radiologist I am interested in the x-ray therapy of thyroidism, not particularly in children because we have not treated many of them.

I agree, of course, that in isolated cases if we report one or two patients probably the results may be bad, but over a period of sixteen years treating some thousands of cases I think that x-ray results are comparable with those of surgery. It is true that you are not going to get cures in all of them, by any means, any more than you are in surgery; but in selected cases I do not believe there is any doubt but what we do obtain good results with x-ray therapy.

In our last report of a thousand cases we reported 80 per cent—I am not going to use the word "cure," because these patients, of course, are apt to have recurrence if they live long enough; this also applies to surgery—but 80 per cent of these patients were definitely improved. Where the metabolism returned to normal they gained weight and they were able to carry on a normal occupation.

There are certain types of thyroids, of course, that are not applicable to x-ray therapy. It is useless to treat any cystic thyroid. It is useless to treat a thyroid where you have mechanical symptoms; these are primarily surgical; but there are cases, especially of these exophthalmic types, which do respond to x-ray therapy. That is not only my own experience, but there are thousands of other cases in the literature which show definite improvement. I do not mean that it will cure all of them, I do not think that any of us cure all of them; but I think that with the cooperation of the internist, the surgeon, and the radiologist good results can be obtained in many cases. Saying the x-rays are of no value in the treatment of hyperthyroidism based on one or two cases is certainly not conclusive.

Dr. Poncher (in closing): In answer to Dr. Stevenson the average metabolic rate was difficult to determine because some of the children were on Lugol's when they came to us. In most of the untreated cases, however, the first determination was above +30. Basal metabolism tests in children are open to so many variations that it is difficult to speak with scientific accuracy regarding them.

Lugol's solution gives the same results in exophthalmic goiter in children as it does in adults. Some workers even report cures with this treatment alone. It is common experience to find that one can administer Lugol's to an exophthalmic goiter patient with clinical improvement for a longer period than was previously thought. Patients under this management, however, should be seen frequently.

In answer to Dr. Barker's question about the possibil-

ity of a child developing hyperthyroidism when receiving iodine, such cases have been recorded in the literature. Marine and Kimball who have had extensive experience with the use of iodine for prophylactic purposes in children state that they have observed no obvious case of exophthalmic goiter developing after the use of iodine.

In answer to Dr. Streicher's question about gastro-intestinal symptoms, particularly diarrhea, we did not see enough gastro-intestinal symptoms in our children to speak with experience. From what has been recorded by other men who have encountered these symptoms in children treatment is the same as for adults.

In regard to Dr. Thompson's discussion, the reason why exophthalmic goiter in children was considered apart from a general discussion of the disease was mainly for diagnostic consideration. In our paper we have attempted to evaluate the classical symptoms of the disease as they are seen in children. This in our opinion, was important because the classical condition is often confused with a symptom complex occurring at puberty especially in girls. As was emphasized in the introduction to this paper it is important to differentiate between true exophthalmic goiter and functional disturbances for purposes of prognosis and treatment. The fact that the peak of incidence of exophthalmic goiter occurs around puberty emphasizes the importance of correct diagnosis. The puberty reaction so closely simulates true hyperthyroidism that great difficulty is often encountered and often a correct diagnosis cannot be established without a period of careful observation. We have termed the children showing symptoms at puberty the "functional group" merely to differentiate them from true exophthalmic goiter. Puberty alone is not always the basis for these symptoms and until our information is more complete it is advisable to refrain from a term which implies more specific information.

While treatment did not come within the scope of our paper there is no essential difference than employed with adults. I should like to say that we probably should not be so dogmatic about what particular type is employed.

In regard to x-ray I do not believe we are in position to say that x-ray does not have a beneficial effect on cases with true hyperthyroidism. We have not employed this treatment long enough nor have carefully evaluated its results. Statements are often found in the literature that a child at this important period should not be exposed to the destructive influences of x-ray. We have no evidence for the latter part of that statement, and it is an injustice to the intelligent use of this treatment. We are not in a position to compare it with the operative procedure because of our more extensive experience in surgical treatment.

In regard to the case that was cited following infection with measles. Cases of this type are very interesting and sometimes most confusing. It is not uncommon to see children who show symptoms simulating hyperthyroidism following focal infection and acute infectious diseases. Careful observation, however, usually establishes the correct diagnosis.

REPORT OF A CASE OF DIAPHRAGMATIC HERNIA WITH REVIEW OF THE LITERATURE

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That the diagnosis of diaphragmatic hernia as a clinical entity has progressed with medical science is evidenced by a review of the literature. Many large series of cases up to 1927 have been reported. Thus we find that prior to 1899 Grosser lists 183 cases. From 1900 to 1927 John Homer Woolsey lists 106 cases. We have presented very briefly a composite of all the findings and completed the study to 1930, and added a case report. Articles from the Quarterly Cumulative Index Medicus were used. From 1927 to 1930 inclusive we found 136 cases. In the four years studied we found as many cases reported as Woolsey was able to find in 27 years, and only 47 cases less than the total number reported prior to 1899 by Grosser. Diaphragmatic hernia, perhaps not more common than formerly, is recognized more frequently. That the x-ray has played an important role in the diagnosis of this condition is reflected in all the cases reviewed.

Mal-development of the diaphragm with improper fusion of the component parts is responsible directly or indirectly for over 60% of all cases. Trauma, fall, stab, gunshot wounds and crushing injuries as etiological factors are next. In the acquired type, the following are important contributing factors: constipation, pregnancy, exertions, obesity, chronic cough, ascites, subphrenic abscess or empyema with rupture of the diaphragm.

The following types of diaphragmatic hernia are discussed: 1. congenital; 2. acquired; 3. traumatic; 4. esophageal opening hernia; 5. thoracic stomach; 6. eventration; 7. true and false hernia.

A true hernia is one in which there is present a sac or membrane covering the hernia. A false hernia is one in which there is no sac or membrane. More than 80% of all hernias have no sac and therefore are false hernias.

Eventration and thoracic stomach although discussed under this heading should not be classified as diaphragmatic hernias. In an eventration there is an absence of the musculature in the diaphragm with a bulging into

the thoracic cavity. The diaphragm is composed of pleura, smooth muscle, peritoneum, and a small amount of connective tissue. There is no rupture of the diaphragm.

In thoracic stomach the diaphragm is intact on both sides but the stomach is entirely or partially within the chest cavity. The esophagus is short and the duodenum or pyloric end of the stomach passes through the opening in the diaphragm which normally accommodates the esophagus.

The preponderance of left-sided diaphragmatic hernia is variously quoted at 5 to 1 to 12 to 1 over right-sided diaphragmatic hernia. The cause is probably due to the embryologic

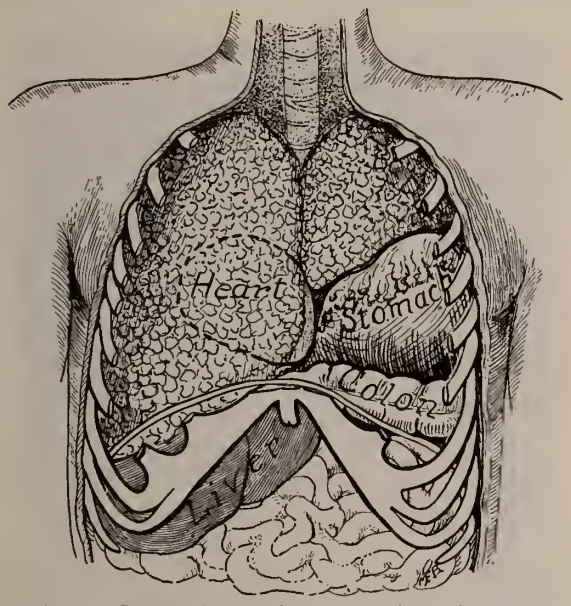


Fig. 1. Schematic drawing of hernia as it appeared at autopsy. Note presence of colon, stomach and omentum in thoracic cavity.

formation of the left side of the diaphragm which is more complicated, closes later, is less vascular, and is more prone to interference with nourishment and consequent arrest of development. Further, the protection afforded the right side of the diaphragm by the liver would make it less prone to diaphragmatic hernia.

Every case of left-sided gun-shot wound of the chest or crushing injury of the trunk is a potential diaphragmatic hernia. The constant negative pressure of the thorax lends its assistance by drawing the omentum into the opening and preventing its closure.

A synopsis of some of the large groups of cases reported are summarized in the following tables:

	False	True	Unknown	Total
Congenital	32	12	6	50
Acquired	3	20	5	28
Traumatic	27	1		28

Left side, 81; Right side, 13; Unknown, 12.
(John Homer Woolsey—San Francisco, Cal.)

Hedblom reports 378 cases as follows:

Traumatic	60.1%
Congenital	14.7%
Acquired	14.8%
Indeterminate	10.3%

Bohn reports 80 cases in which only 14 cases were found where a hernial sac was present.

Popp reports 42 cases in which 37 were left-sided and 5 right.

Ballantyne reports 67 cases, 47 males and 27 females.

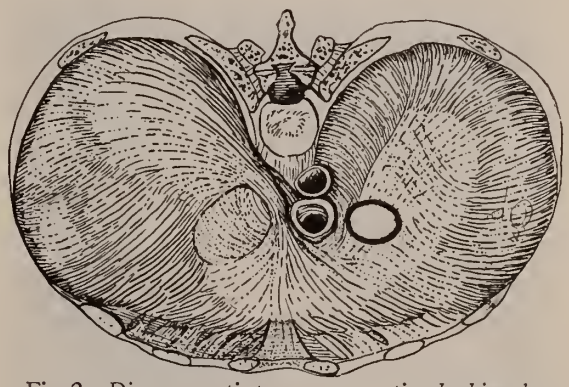


Fig. 2. Diagrammatic transverse section *looking down* upon the dome of the diaphragm showing location and relative size of hernial opening (left).

Hedblom found only 6 cases in infants under 1 year of age.

In the obstetrical hospital, the University College Medical School, London, they report one case of diaphragmatic hernia in 800 deliveries and 1 case in 200 autopsies.

In our series we found:

TYPE:

Congenital	63
Traumatic	32
Acquired	22
Indeterminate	19

SEX:

Male	93
Female	39
Infants (under 1 year)	4

AGE:

The majority were in the third and fourth decade. A case has been reported by Carman in a female 75 years of age.

LOCATION:

Left side	116
Right side	14
Unknown	6

There was a definite hernia sac in only 21 cases of the 136 reviewed.

The most common location of occurrence of these hernias, especially of the congenital and acquired type was:

1. Esophageal opening.
2. Dome of diaphragm, particularly the left.
3. The embryonic fusion points.

The traumatic hernias may occur in any location but particularly at an embryonic fusion point or at a congenital weak point in the diaphragm.

CASE REPORT

White male, 30 years of age, single, laborer and a native of Illinois. He was committed to the Dixon State Hospital on August 11, 1921, and remained there until February 17, 1922. The diagnosis there was epileptic psychosis. He was discharged as improved and remained home until August 21, 1930, when he



Fig. 3. Photograph of hernia from below. Museum specimen. Illinois State Psychopathic Institute.

was committed to the Elgin State Hospital. At this time he attempted to commit suicide by stabbing himself about three days before admission with a sharp table knife. At the time of admission, the sutures were still in the area of the wound, on the left-side in the sixth interspace in the mid-clavicular line and about 3 cm. in length. Immediately after admission here he had a severe convulsive seizure. He was very much confused for two weeks. In about four weeks he had completely recovered from his epileptic seizure and had been very agreeable and cooperative and had made a very good adjustment. The diagnosis here was epileptic psychosis with clouded states. He was assigned as a helper in the physiotherapy department and his physical condition was good until January 19, 1931, approximately five months since his admission, when he complained of a very acute pain in the left chest and was removed to the general hospital.

When seen at the hospital he was in a state of shock, in great suffering and sweating profusely. The temperature was sub-normal, the pulse rapid and the respiration shallow. There was associated frequent vomiting and a slight hiccough. Physical examination revealed a dullness over the entire left chest, more marked in the upper half. There was an absence of breath sounds. The heart was displaced entirely to the right of the midline.

X-ray and fluoroscopic examination revealed the heart displaced in the right chest. In the lower half there was a large, circumscribed, cocoanut-sized area of decreased density, with an apparent absence of lung tissue. The left diaphragm could not be differentiated.

A diagnosis of diaphragmatic hernia with strangulation was made. Due to the poor condition of the



Fig. 4. Photograph of hernia. Lateral view. Museum specimen. Illinois State Psychopathic Institute.

patient, surgical treatment could not be considered. The patient grew steadily worse and died January 21, approximately 54 hours after the onset of symptoms.

At autopsy, in the sixth interspace, mid-clavicular line, in the substance of the external intercostal muscle, there was a thin linear fibrous band corresponding to the same lesion in the skin in the same area. In the parietal pleura below this scar, it could not be further identified.

The diaphragm on the right side in the mid-clavicular line, reached to the fifth interspace; on the left, it was parallel with the costal arch.

The left thoracic cavity contained about 1,500 cc. of a cloudy, brownish fluid. The left lung was com-

pletely collapsed. The heart was entirely to the right of the midline.

4 cm. to the left of the midline and between the muscle fibers that join to form the left crus of the diaphragm, and on a level with the twelfth thoracic vertebra there was a circular opening 5 cm. in diameter. Through this opening, the stomach, the gastro-colic ligament, and part of the middle third of the transverse colon passed into the thoracic cavity. The cardiac and pyloric ends were in the abdomen. The transverse colon was kinked. The pancreas and spleen were displaced towards the opening. There were no adhesions, or any hernial sac or membrane. The abdomen contained 200 cc. of a faint red, serous fluid. The stomach was very soft, brownish-black in color, and spotted with many light red areas. There was a large opening about 8 cm. in diameter. The area surrounding it was greatly thinned and very soft, a postmortem softening and rupture. When distended this mass filled the thoracic cavity to the 2nd interspace.

In the case presented the question of classification must be considered. The history of the injury sustained by this man is not sufficient to warrant a diagnosis of traumatic hernia. We feel, however, that this individual, an epileptic, with epileptic seizures, was under a severe muscular strain, especially of the diaphragm and abdominal muscles. It is not unreasonable to assume that each time he had a seizure, there was a gradual yielding of this, a congenital weak point in the diaphragm. Therefore, we classify this case as a false acquired diaphragmatic hernia.

Discussion: Diaphragmatic hernias are composed of, in the order of frequency: stomach, omentum, transverse colon, spleen, jejunum and ileum, duodenum, cecum and appendix ascending and descending colon. The kidneys and pancreas are very rarely included in these hernias. The diagnosis of diaphragmatic hernia is usually delayed. In the traumatic type, there is a considerable time interval in most cases between the occurrence of the traumatic lesion of the diaphragm and the recognition of the subsequent hernia of the abdominal contents. The congenital and acquired type may persist from childhood to old age without symptoms distressing enough to point out a diaphragmatic hernia. The most and only positive method in the living is the x-ray and fluoroscope.

In many cases an x-ray picture or fluoroscope examination in the erect position will not reveal the hernia; however, in the recumbent position it may be clearly defined.

Early diagnosis and early surgical intervention is indicated when the patient's condition permits. There are various technical operations resorted to by the thoracic, the abdominal, or a thoracic-abdominal route. There is also a two-stage operation usually employed in hernias which are very large and in which there is, first, an extra-pleural thoraco-plasty involving the lower chest on the affected side; and second, the repair operation. There is also a method in which the first stage is a left phrenicotomy which serves to relax the left half of the diaphragm; second stage, repair. The advantage of the phrenicotomy is that it acts as a palliative in certain cases of mild diaphragmatic hernia in which radical surgery is contraindicated. It is also valuable in obese patients and in patients where a plastic operation on the diaphragm for a large hernia is to be performed. Large defects in the wall of the chest and diaphragm may be repaired and a closed thorax maintained by utilization of the paralyzed diaphragmatic musculature following phrenicotomy. The prognosis in diaphragmatic hernia is usually grave due to a slow diagnosis and late operative interference. Early diagnosis and early operation reduce the mortality 50%.

The causes of death following operations are: 1. Shock; 2. Peritonitis; 3. Pneumonia; and 4. Empyema.

The commonest complication following operation is pleural effusion.

According to Hedblom, the mortality rate in the non-obstructed cases is 24%; in obstructed cases 53%.

LAPAROTOMIES

Laparotomies	43%
Thoracotomies	20%
Combined operation	26%

Strangulation occurs in about 15%.

CONCLUSIONS

1. Small hernia of the diaphragm may be present for years without causing symptoms.

2. Diaphragmatic hernias occasionally follow seemingly insufficient trauma to account for the amount of diaphragmatic injury. It is reasonable to suppose these conditions occur as a result of slight injury or sudden muscular contraction on a small diaphragmatic defect already present.

3. Diaphragmatic hernia is more frequent in the male than in the female.

4. Diaphragmatic hernia is more frequent on the left side than on the right.

5. Congenital diaphragmatic hernias constitute the largest number of diaphragmatic hernias with the traumatic and acquired practically equally numerous.

6. The occurrence of these hernias is usually through a normal opening in the diaphragm, dome or the embryonic fusion points.

7. Every case of gunshot, stab wound or crushing injury of the chest is a potential diaphragmatic hernia.

8. Thoracic stomach is not a true diaphragmatic hernia, nor is eventration.

9. The prognosis is usually grave; however, by early diagnosis and early surgical intervention we can hope to reduce the mortality.

In closing, I wish to express appreciation and thanks to my good friend, Dr. Sidney D. Wilgus, Director of the Institute and State Alienist, for his many constructive suggestions. Also, I wish to thank Dr. George A. Wiltrakis of the Elgin State Hospital who assisted me at the autopsy, and furnished much of the clinical data on the case reported. Without Miss Olladene Twaddle, my efficient secretary, this article would not have been possible.

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Skeptical Customer—Can this coat be worn in the rain without hurting it?

Salesman—Did you ever see a beaver carrying an umbrella?—*N. U. Purple Parrott.*

He (over phone)—Is this the Salvation Army?

The Salvationelly—Yes.

He—Do you save bad women?

She—Yes.

He—Well, save me a couple for Saturday night.—*Buffalo Bison.*

"Thanks for the tip," said the Rabbi,

A CASE OF ACUTE GANGRENOUS APPENDICITIS WITH UNUSUAL PATHOLOGICAL FINDINGS

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Associate Professor Surgery
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Although appendicitis is not an unusual phenomenon, and although every practitioner of medicine is relatively familiar with the pathological picture of an acute appendicitis, nevertheless, due to the enormity of size and peculiar characteristics of this specimen, it was thought that in reporting this case, it would purport something of unusual interest to members of the medical profession. A perusal of the literature was made but proved very unsatisfactory. There were several references to

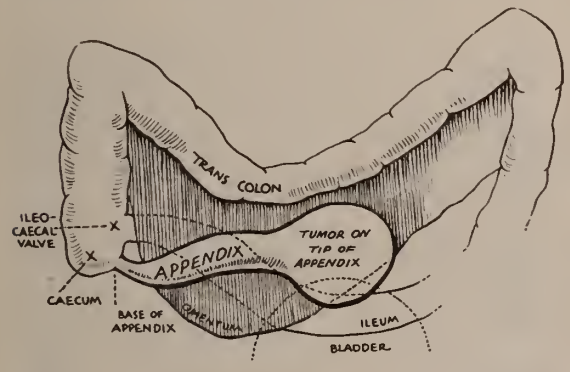


Fig. 1. The omental adhesions covering the appendix were purposely omitted in order that the artist might more clearly show the intra-abdominal position of the appendix.

the mucocele of the appendix as described by Bowman Crowell, but we were unable to find any previous articles on such a pathological picture as we are going to present.

The patient was a young adult male of twenty-two years of age who had been having generalized abdominal pains of a cramping nature for one week beginning approximately on November 17, 1931. He first vomited on November 22, and at this time the pain became localized in the lower right quadrant. This condition persisted until November 24, when he sought medical attention. He was admitted to Wesley Memorial Hospital on November 24. Physical examination revealed a young adult male acutely ill. Temperature was 101.4 and leucocyte count was 23,400. General examination was negative. Abdomen was tender and rigid in the lower right quadrant, but seemed most acutely tender towards the mid line. A diagnosis was made of acute gangrenous appendicitis with abnormal location of appendix.

Under gas induction ether anesthesia a muscle splitting incision was made slightly lower than the customary McBurney incision. Due to inability to see or deliver the appendix, the incision was extended well downwards. The pathological picture that presented is shown schematically in Fig. 1. The omentum was firmly adherent to appendix and could only be freed by severing the omental attachment



Fig. 2. Photograph of appendix and tabs of omentum. 2/3 actual size.

to the appendix. Once the appendix was freed, large amounts of yellow purulent exudate appeared. The appendix with the large tumor mass at tip was removed by the usual technique. Nine cigarette drains, with gauze removed, were inserted. All layers except skin were closed simultaneously with interrupted catgut sutures. Skin was closed with a few interrupted silkworm gut sutures.

After running a stormy postoperative course, patient was finally discharged on February 23, 1932. He has a persistent fecal fistula which will be amenable to surgical treatment at his discretion. Otherwise, he is

in good health, pursuing his customary duties and has a firm union of the abdominal wall showing no evidence of herniation whatever.

Pathological Report. Gross: The whole mass weighs 180 gms. The calcareous mass measures 2-1/2 cm. diameter by 3 cm. long and is firmly imbedded in the inflammatory mass which surrounds it. The inflammatory mass has a smooth serosal surface but that part of the wall immediately adjacent to the cavity is gangrenous. The diameter of the inflammatory mass is 5 to

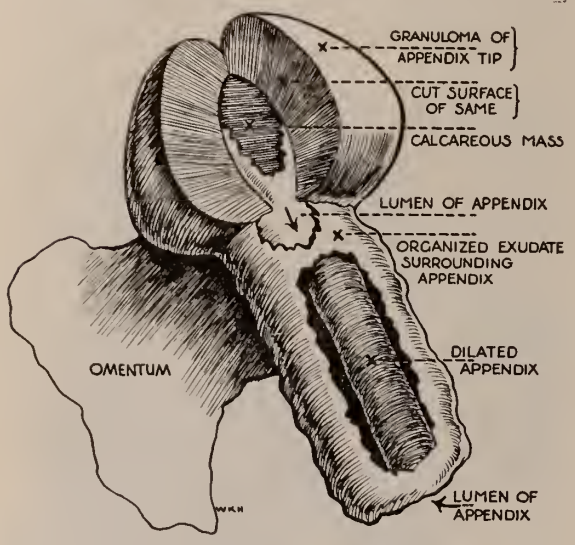


Fig. 3. Diagrammatic explanation of Figure 2.

5-1/2 cm; the thickness of the wall is 1 to 2 cm. The appendix is 8 cm. long; the diameter of the mass of exudate is 4 cm. This latter has a rough surface. The appendix is filled with necrotic and hemorrhagic material and a large piece of omentum is adherent to it.

Microscopic: Sections from all parts of the specimen show high grade chronic inflammation with recent acute gangrenous process superimposed. Sections from the calcareous mass show irregular calcification of a necrotic debris without definite bone formation.

Pathological Diagnosis: Chronic nonspecific granuloma of appendix, acute gangrenous inflammation superimposed, calcified foreign body in lumen.

Summary: We have presented an unusual pathological picture. Conclusions drawn from the processes present would indicate the following sequence of events. At some time, probably several years back, the appendix had presumably ruptured at the tip leading to abscess formation. This was followed by fatty infiltration and calcification of the pus present, and a transition from acute to chronic inflammation in the abscess wall. The chronic inflammatory state persisted for several years and finally, about one week before the patient sought medical attention, the acute process became superimposed.

The authors wish to express their appreciation to Dr. J. M. Dieckmann, Pathologist at Wesley Memorial Hospital, Mr. Joseph V. Mansfield, of the Chicago Medical School, and Mr. W. K. Higgie, of the Chicago Art Institute, whose collaboration made this article possible.

THE TREATMENT OF PEPTIC ULCERS WITH AN EVAPORATED MILK DIET

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Peptic ulcer occurs in the regions subjected to the pepsin and hydrochloric acid of the gastric juice, which includes the stomach, duodenal cap, duodenum and jejunum, and sometimes other portions of the tract.

The cause of gastric and duodenal ulcers as they occur clinically has not been satisfactorily established. It is probable that ulcer is not the result of a single process but that there are many factors involved in its formation. Among the various possibilities which have been named as factors in the cause of ulcer are general lack of resistance, injury or disease to the mucosa, the digestive action of the pepsin and hydrochloric acid of the stomach, increased nervous tension, bacterial infection, toxic manifestations and constitutional predisposition.

Gastric and duodenal ulcers are found most frequently in young and adult middle life. Ninety per cent of these ulcers are at the pylorus or on the first two inches of the lesser curvature.

Peptic ulcers are of two types, acute and chronic. Acute ulcers occur most commonly in the course of some acute infection or chronic wasting disease, and usually give rise to no symptoms. In a few cases they perforate, and in some they lead to hemorrhage. An acute ulcer may go on to chronicity.

The symptoms of the typical cases of peptic

ulcer are as follows: pain or epigastric distress about two or three hours after eating. There is a sense of irritability with this pain which is sometimes accompanied by nausea, eructation, or vomiting. There is a soreness or tenderness which lasts until the next meal, that may be relieved by vomiting or the taking of food or alkalis. There is often constipation, loss of weight, and anemia in women. There is usually a high acidity of the gastric contents, the presence of blood or occult blood in the feces, and the positive thread test.

Roentgen ray examinations are of great assistance in discovering the location and type of ulcer as well as the presence of complications. It furnishes a means of deciding the progress of the ulcer, whether it is healing, recurring, or whether surgical interference is necessary.

Cases of peptic ulcer without complications require operations only when medical treatment has failed. Indications for surgical treatment are perforations, cicatrical pyloric stenosis, organic obstruction, repeated hemorrhages, suspected malignancy, and severe pain or discomfort.

The surgical method employed depends upon the conditions found. The types of operations most commonly used are gastro-enterostomy, pyloroplasty, and resection.

The medical treatment of peptic ulcer consists of rest, removal of all focal infections, and a carefully selected diet. Since focal infection is a probable factor in the cause of ulcer, all sources of it should be removed before treatment is begun. The teeth and mouth should receive scrupulous care. Complete rest in bed should be maintained. The patient is put upon a milk diet as soon as the symptoms of ulcer appear. The temperature of the food must not be too hot nor too cold. The presence of free hydrochloric acid is the cause of distress in peptic ulcer without complications, and relief is accomplished by methods that neutralize, combine or remove the hydrochloric acid from the ulcer-bearing region. Neutralization of this acid by the hourly or two-hour administration of milk as well as by alkalis promotes the healing of ulcers in many cases.

Where hemorrhage is present, the patient should not be allowed to leave his bed. Nourishment by mouth is not permitted. When necessitated by the enfeebled condition of the patient, nutrient enemas must be employed for from three to five days.

There are four plans of treatment which may then be given, and which may be applied immediately to uncomplicated cases. They are the Lenhartz cure, the Leube cure, the Smithies cure, and the Sippy cure.

The Lenhartz treatment consists of rest in bed for four weeks at least. He believes it best to prescribe protein food to overcome hyperacidity and the enfeebled state which accompany ulcer. The treatment is typical only during the first two weeks. The first day two eggs are given, beaten up with sugar, and one egg a day is added until the patient is eating eight eggs daily. The eggs are taken for the high caloric value. Milk is given daily in increasing amounts. By the end of the first week 70 gm. of raw beef is allowed daily. By the tenth day rice, zweiback, raw ham, butter and milk are added. Bismuth subnitrate is given from the beginning and continued for ten days.

The Leube treatment requires rest in bed for fourteen days upon a liquid diet, mainly milk. A hot poultice is applied to the epigastrium for the first few weeks, and a half pint of Carlsbad water is given an hour before breakfast. After two weeks soft food is added to the diet, although it still consists mainly of milk, and after the fourth week the easily digested vegetables in the puree form may be allowed.

Smithies uses neither alkalis nor milk. He tries to induce in the stomach a state of physiologic rest; no food is given by mouth for from four to seven days. The patient remains in bed. Paraffin wax is chewed and rectal feeding instituted. When mouth feedings are begun, a diet of barley water, rice gruel, thin creamed vegetable soup, etc., is prescribed, as carbohydrates leave the stomach the quickest. Belladonna or bromides are sometimes given.

The Sippy treatment has yielded gratifying results. The method of treatment is to promote the healing of the ulcer by shielding it from the acid corrosion. Protecting the ulcer from the corrosive effect of the gastric secretion is effected by maintaining a neutraliza-

tion of all free hydrochloric acid from early in the morning until late at night. This is accomplished through the free and frequently repeated administration of alkalis and frequent feedings. The patient rests in bed for from three to four weeks. The diet at the beginning of the treatment consists of three ounces of a mixture of equal parts of milk and cream given every hour from 7 A.M. to 7 P.M. After three days, three softboiled eggs and well-cooked cereal, with the milk and cream mixture every hour, are given each day. Powders of magnesia and soda alternated with powders of calcium carbonate and soda are given to neutralize the acid.

Aspiration of the stomach contents is done at various periods of the day three times a week until the results show the acidity is neutralized and there is no residue.

After four weeks of this treatment an increase to three small meals daily is made with milk and cream mixture hourly and alkalis half-hourly as before. The meals consist of toast, cream soups, eggs, mashed potatoes, cooked fruits, cooked tomatoes, spinach, custards, cereals, gelatin, whipped cream desserts. Aspirations should be done monthly. Beginning with the tenth week the alkalis must be stopped for five or six days every six weeks.

The first requirement in the treatment of chronic ulcer is rest in bed. If there is hemorrhage, the patient should receive no nourishment until the hemorrhage ceases. An ice bag or cold compress may be applied to the epigastrium for three hour periods, and removed for intervals of one hour. Small amounts of cracked ice may be given to allay thirst. The Murphy drip method may be used to supply fluids, giving a pint of plain water, normal salt solution, a weak soda solution, or ten per cent glucose solution two or three times every twenty-four hours.

The diet is the most important part of the treatment. It is necessary to neutralize, combine, or remove the hydrochloric acid from the ulcer-bearing area to gain relief. The diet should be of such a nature as to not stimulate the gastric secretion and cause further irritation. It should contain a sufficient caloric value and a high vitamin content. It must be given in small amounts at frequent intervals.

In the course of treatment of ulcer patients I have prescribed evaporated milk in the diet in place of fresh milk and cream with very satisfactory results.

The processes of homogenization and sterilization which evaporated milk receives serve to break down the fat globules and to make the protein more digestible. Also, the protein loses some of its toxicity. The curds which form in the stomach are small and flocculent, therefore less irritating to the stomach than the large tough curds resulting from fresh milk. The fine fat globules expose a larger surface to the action of the fat digesting enzymes. There is no irritating effect of free fatty acids.

The calcium of evaporated milk is rapidly available and the retention is better than fresh milk as it contains no lactic acid bacillus to increase acidity.

Evaporated milk contains all the vitamins which bottled milk is depended upon to supply. The caloric value is 43 to the ounce. It is of uniform composition, easily obtainable, cheap, and sterile. There is no chance of bacteria entering the stomach in the milk to aggravate the condition.

In cases of peptic ulcer it is necessary to give small amounts of food at frequent intervals. Evaporated milk, having twice the concentration of fresh milk, and being readily assimilated with no irritation to the stomach, may be given in the same quantities as fresh milk, or even larger ones, and has the advantage of possessing more food value and mineral contents. It is unnecessary to add additional fat in the form of cream to increase the caloric content.

I have found that some patients who have an allergy to fresh milk are tolerant to evaporated milk.

It is necessary, as a rule, to administer alkalis with the milk diet. Bismuth and anesthesin may be prescribed as an anodyne.

Case 1. Marshall G., 36 years old, had had tonsillitis when he was 17 years old. His tonsils were removed when he was 25. Shortly afterward he had epigastric distress after eating for a period of two weeks. From that time on he had a period of epigastric pain every spring. They appeared two hours after eating, were relieved when he ate or by vomiting and gradually became more severe.

He consulted me in June, 1931. The test for occult blood in the stools was positive. There was a high hydrochloric acidity. He was ordered to bed immediately, put upon an evaporated milk diet, and given alkalis. He

received three ounces of evaporated milk every two hours from 7 A.M. to 7 P.M. After three days he was given a coddled egg, and some well-cooked cereal, with the evaporated milk every two hours. The eggs were gradually increased until he received six a day. A week later he was put on a restricted diet. The evaporated milk was continued in the same amounts.

He was permitted to get up after a week in bed, but remained on a restricted diet. He has had no symptoms since that time.

Case 2. John McC., 51 years old, had complained of heartburn and occasional pains three hours after eating for a period of six years. These had been relieved by the taking of food. When he was 47 years old he began to awaken at night with severe pains. He lost 45 pounds of weight in two years, and began to have weak spells and faint. The stools were black.

He consulted me in March, 1930. He was ordered to bed immediately, and received no food by mouth for three days. Nutrient enemas were employed. Bismuth subnitrate and anesthesin were given. The fourth day he was given one ounce of evaporated milk every two hours. The fifth day, in addition to the milk, he received a coddled egg. From that time on, the amount of eggs was gradually increased until he received eight coddled eggs a day. On the sixth day the evaporated milk was increased to two ounces every two hours. After two weeks he was put on the restricted diet, continuing with the same amount of evaporated milk. The third week he received three ounces of evaporated milk every two hours. He improved rapidly, gained weight, remained on a careful diet, and has had no return of symptoms.

Case 3. Marion W., 19 years old, consulted me in December, 1930. She was pale and weak. She complained of dizzy spells, constipation, and nervous exhaustion. I found she was anemic. She complained of occasional heartburn, but had no epigastric pain except on pressure. At times she had a pain in her back which was relieved by eating. Her stools contained occult blood.

She was put to bed and received two ounces of evaporated milk every two hours. After two days she also received a coddled egg and cereal, and after a week was put on a restricted diet. The evaporated milk was increased at that time to three ounces every two hours. She has continued on a careful diet and has had no return of symptoms.

Case 4. Arla J., 35 years old, had infected teeth and pyorrhea. She had complained for the last three years of eructations, nervousness, and epigastric pain two hours after meals. Her pain was relieved by eating. She awakened one night with an extremely severe abdominal pain. This subsided after she had applied a hot poultice and vomited ½ pint of coffee-ground fluid which was very acid.

She consulted me the next day, which was in November, 1931. She was ordered to bed, and received no food for three days. Bismuth subnitrate in dram doses was prescribed. On the fourth day she was given one ounce of evaporated milk every two hours. The next day this was increased to two ounces every two hours. On the sixth day she was given a coddled egg, and the amount of eggs was gradually increased until she was receiving eight. The milk was continued in the same amount. She was put on a restricted diet on the eighth day, and the evaporated milk was increased to three ounces every two hours.

She had her teeth and pyorrhea attended to, and having adhered to a careful diet has had no symptoms since.

Case 5. Louis B., 32 years old, consulted me in August, 1930. He complained of heartburn, occasional vomiting, hyperacidity, constipation, and loss of weight for the past two years. I found a chronic appendicitis. The patient was ordered to bed, given the evaporated milk diet and alkalis, and later a restricted diet. The symptoms disappeared and I advised removal of the appendix. The patient refused to have the operation.

He remained free of ulcer symptoms for eight months, when he again consulted me, having a recurrence of his previous symptoms. He was again put under the same treatment, and gained relief. Two months later I removed the appendix. He has remained free of symptoms since that time.

CONCLUSIONS

1. The etiology of Ulcer is still unknown.
2. The Lenhartz, Leube, Smithies and Sippy treatments have given good results.
3. The use of evaporated milk in the place of other forms of milk in ulcer diets is believed to be a further advance because of the following advantages: easily digested, it contains no lactic acid bacilli, it is concentrated, and it is sterile.
4. The five cases reviewed using an evaporated milk diet have all shown rapid improvement and uneventful recovery.
5. I believe this modification of the usual ulcer diet merits further investigation.

2030 Irving Park Blvd.

RADICAL MASTOID OPERATION WITHOUT PLASTIC SURGERY*

MAURICE H. COTTLE, M.D.

CHICAGO

In the early nineties of the last century the radical mastoid operation was placed on a scientific basis by the masters Zaufel, Jansen and Stacke; yet the decade had not passed when modifications were urged by other prominent specialists. Chief among these was Korner who in 1899 stated that in certain patients in whom the preservation of hearing is at stake, the operation may be modified so as to leave the ossicles and the drum membrane intact. In 1906, Bryant, of this country, and Heath, of London,

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again brought to attention modifications of the radical mastoid operation which were designed to preserve, if not to improve, the hearing function. Barany visited Chicago in 1920, and in several of his talks recommended his modification of the radical mastoid operation. This was essentially the classical mastoid operation without plastic flaps, in which middle ear parts were either removed or left alone. So far as I can determine it differed very little from the operation advised by Korner in 1899. However, Barany claimed that all the hearing present at the time of operation was retained for a longer period, even though the aural discharge was only moderately improved.

In 1912, at the International Congress of Otologists in Berlin, Kopetzky read a critique establishing the following claims:

First: That the simple mastoid operation if performed on the same class of patients would yield as good results, so far as hearing is concerned, as does the modified radical operation, and would also better meet the surgical indications.

Second: That the modified operation does not meet any of the requirements of the radical operation.

Third: That in chronic suppurative otitis media of long duration the modified radical operation cannot, from a scientific standpoint, restore to functional activity a diseased ossicular chain or heal necrotic areas in the annulus tympanicus, in the tympanic, adital, or antral walls.

Fourth: That as a substitute for the simple mastoid operation the modified radical operation offers no advantage.

Similarly, in a symposium on radical mastoid surgery conducted in London and reported in the proceedings of the Royal Society of Medicine, Heath's two modifications of the radical mastoid operation were discussed. Both were severely criticized, and Heath was accused of having re-discovered the earlier Stacke and Kustener operations. The hope was expressed that he would soon re-discover the typical radical mastoid operation.

About eleven years ago Dr. Norval Pierce brought to our attention the inadequacies of the classical radical mastoid operation, and focussed our attention particularly to the frequent persistence of aural suppuration following the operation. He felt constrained to present a new operation, whereby the Eustachian tube was better dealt with in the attempt to keep it closed. In the following year Watson of Edinburgh reported on eighty-four consecutive cases operated on by Drs. A. Logan Turner and J. S. Fraser and others. Watson stated that while the percentage of dry ears was greater following the radical operation, the hearing was better in those who had modified operations.

Thus in the last four decades there has not been a unanimous acclamation of the radical mastoid operation, while at the same time modifications have met a most unfriendly reception. The chief drawback of the former is the subsequent loss of hearing in some percentage. The objection to the latter is persistence of the discharge.

During the past ten years I have tried to deduce from my own experiences which procedure more adequately serves the best interests of the patient and still takes cognizance of the two opposite prevailing viewpoints. There is no denial of the fact that the radical operation is likely to be followed by a loss of hearing. This is not necessarily true of the modified radical. The following case is an exceptional opportunity for comparing these two operations as done on one patient:

Case 1. R. S., a 10 year old boy, was admitted to the hospital on September 10, 1930, with discharge from both ears for the past four years. There were pain, headache, and swelling about the right ear of four days duration. There were also tenderness over the mastoid and a swelling in the canal, localized to the posterior wall; the latter was thought to be an inflammatory swelling about a fistula. A modified radical operation was performed. Outside of the usual immediate post-operative management no further treatment was given.

Nine months later the boy was re-admitted to the hospital for treatment of the other ear. Because of the history of a discharge for five years despite persistent treatment, and x-ray evidence of bone necrosis, a colleague performed the usual radical operation with a plastic flap. A review of the facts in the subsequent course of this patient shows the following: First, both ears are dry and have been since the operations; second, the right ear, which was operated on first without the plastic at the time of the first operation, was definitely the poorer ear functionally; third, at the present time we find that the right ear has retained its hearing after a year and a half, while the left ear, after only ten months, shows loss of perception of the higher tones. so marked that the right ear is now the better one,

On several occasions I have performed the simple mastoid operation on patients with chronic otorrhea, but frequently I have met with disappointment, as the aural discharge continues unabated and resists the most assiduous treatment. The following case is a typical example:

Case 2. R. H., at the age of 3 years gave a history of otorrhea for two years. For the last six months a competent otologist had carried out active treatment without results. An extensively thorough simple mastoid operation was performed. The discharge persisted after operation for one year, despite most careful treatment. Occasionally there seemed to be improvement for three to five days, but the relapse was complete.

I have also had occasion to observe the results of the simple operation performed by others under similar conditions. The following two cases show the inadequacies of these operations, and at the same time they show conclusively that the modification may result in a controllable slight otorrhea while all the hearing is preserved.

Case 3. M. B., aged 14 years, had a simple mastoidectomy six years before coming to us. The following year the otologist was constrained to repeat the operation. We saw the patient with a foul-smelling discharge and a fluctuating swelling over the mastoid. A modified radical was performed in October, 1930. With the usual medical after-care the ear has remained practically dry to date.

Case 4. C. B., 10½ years of age. Two years before seeing us a simple mastoidectomy was performed at Cook County Hospital. The discharge persisted after the operation for one year, despite treatment, when a fistula in the wound was formed. This suppurated continuously for another year, at which time we performed a modified radical operation. We have treated the ear very little since, except for superficial cleaning, but we have watched the progress very carefully. I can say at this time—nine months after the patient's discharge from the hospital—that there has never been more than a slight amount of mucus discharge obtainable by swabbing. The hearing has been totally preserved.

The following case is typical in demonstrating the preservation of hearing.

Case 5. S. S., 13 years of age, who was operated on a year and a half ago, shows about the same degree of hearing now as he did at the time of operation. Also, there is only the slightest amount of mucus discharge persisting.

Every once in a while we are confronted with a patient with a bilateral, chronic, aural discharge, who comes for some reason for operation, and upon investigation we learn to our chagrin that the ear to be operated on is functionally the more useful one.

The cause for discrepancy in the two ears is often due to the fact that the simple mastoid operation has previously been done on the ear which still functions. In this type of case it requires great courage to do a classical radical operation, since the danger of losing the remaining hearing is great, especially in children. If, after the operation, more hearing is lost, the child who has not yet finished his education may lose his power of speech to a marked degree and suffer in general from the handicaps of the totally deaf. I have treated several such children after a modified radical operation had been done, and have found again little change in the hearing. Even if the discharge cannot be totally cured it can be reduced to such an extent that neither the quantity nor the odor is particularly objectionable to the patient or his family.

CONCLUSIONS

1. The modified radical operation does not result in as great a menace to the hearing function as does the classical radical.

2. The persistence of otorrhea after a modified radical operation may very often be satisfactorily controlled by conservative treatment.

3. Frequently the simple mastoid operation does not accomplish what the modified operation does in a chronic case.

4. It is not a disadvantage to perform a modified operation in a questionable case, because it does not conflict with the subsequent performance of the classical radical mastoid operation if this becomes indicated.

5. Persistent treatment after the modified radical operation has been performed will influence very favorably the course of the disease.

30 North Michigan Ave.

DISCUSSION

Dr. A. R. Hollender, Chicago: I am prompted to discuss this paper because I have had occasion to observe the essayist's work. I have consistently followed the cases which he has cited. Because of the end results obtained in those cases which were selected for the radical mastoid without plastic flap, I am strongly in favor of this operation. I appreciate the fact that circumstances alter the indications, and that many times the type of operation will depend upon individual factors. It is for these reasons that the essayist emphasizes the necessity of careful selection of cases.

There can be little argument concerning the extreme importance of preserving the hearing function, particularly when there is a definite loss of hearing in both ears. One must choose between the two evils, an impaired hearing or a persistence of the discharge. The lesser one seems to be the aural discharge.

The secret of a satisfactory final result is the postoperative management of the otorrhea. The essayist has purposely refrained from elaborating on the recent advancements on this subject. It is not especially pertinent to this paper, yet one's preference for one or the other of the surgical procedures would be materially influenced if the prognosis, so far as the otorrhea is concerned, was favorable.

One must be prepared to meet this situation after the modified operation is performed. It requires conscientious effort to effect a result with which the patient is satisfied. So long as the modified operation removes the danger of intracranial complication, and this appears quite likely, and at the same time preserves what remains of the hearing function, this procedure merits consideration. The indications should not be confounded with those for the simple and more radical mastoid operations. It is simply a matter of recognizing that a more conservative procedure is available and that it meets adequately the needs of a definite group of patients.

The essayist should be commended for presenting this subject. The otologist is always interested in progressive work in the specialty, and to my mind Dr. Cottle has demonstrated a keen sense of observation and thought on this problem of radical mastoid surgery.

Dr. James W. Sanders, Decatur: I should like to ask Dr. Cottle whether he has had any experience with x-ray therapy in these cases, and if he has, has it lessened the discharge after operation.

Dr. George Woodruff, Joliet: If I understand this correctly, Dr. Cottle's modification consists in doing the classic radical with the exception of the plastic flap. If that is the case, I wonder how he explains the retention of hearing, or what procedure he makes a practice of following in these cases.

Dr. Maurice H. Cottle, Chicago (closing): This operation is not my modification. I have not made the attempt to remove every single remnant of drum membrane, for example, or a necrotic malleus.

I have had no experience in treatment of aural discharge with x-ray.

THE USE OF CONVALESCENT SERUM AND HUMAN BLOOD IN SUSPECTED POLIOMYELITIS*

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PEORIA, ILL.

Since 1910 Flexner and others have demonstrated experimentally that the blood serum of human beings and monkeys convalescent from poliomyelitis has definite antiviral properties. Shaughnessy, Harmon, and Gordon and others have also shown experimentally that the serum from persons who have been in contact with frank cases of poliomyelitis, and the serum from normal adults never in contact with known cases of the disease, have a power to neutralize active poliomyelitis virus at least equal to that derived from persons who have recovered from an attack of the disease. The efficacy of convalescent serum and normal human serum has been difficult to establish beyond peradventure clinically. Numerous workers have given these laboratory results extensive clinical trials. Most of them are of the opinion, that because of its laboratory background, and in view of the apparent harmlessness of such therapy, its use should be continued.

In 1931 through the diligence and cooperation of the State Department of Health, convalescent serum was made available to the physicians of Illinois. My limited experiences with the use of the serum and human blood in cases of suspected poliomyelitis are presented in this paper.

CASE REPORTS

1. September 3, 1931. B. W. Female. Aged 7 years. Headache and vomiting of 4 days duration. Rigidity of the neck and spastic paralysis of both legs, and the right arm today. Marked general dehydration. Temperature 101 deg. F. White blood count 19,325. Lumbar fluid clear, pressure 8 mm. Hg.; cell count 135. Because of the extensive paralysis no serum was given. Treatment consisted of the administration of salt solution intraperitoneally, and repeated spinal drainage until the acute illness had subsided. This child has been under the care of a competent orthopedist, but she has yet to recover from a great deal of her paralysis. The case is reported for the comparison of its clinical findings with those of the others.

2. September 4, 1931. P. F. Female, Aged 5 years. Pain in the back of the neck, drowsy, vomiting and diarrhea of 24 hours duration, following a sudden onset with a chill. Neck resistant to flexion. Temperature 104 deg. F. Lumbar tap dry. Cisterna fluid clear, pressure 20 mm. Hg.; cell count 2 lymphocytes. 20 cc. of convalescent serum were administered intramuscularly. Six hours later the patient's temperature rose to 106 deg. F., and then following a profuse sweat, dropped to normal. She made a rapid recovery, with no paralysis.

3. September 12, 1931. L. L. Male. Aged 4 years. Headache and vomiting during the night. Two convulsions this morning. Quite drowsy. Neck and knees rigid. Temperature 103 deg. F. Lumbar fluid clear, pressure 28 mm Hg.; cell count 2 lymphocytes. 20 cc. of convalescent serum were given intramuscularly. A rapid recovery followed. No paralysis.

4. September 16, 1931. M. H. Female. Aged 7 years. Headache, abdominal pain, diarrhea and drowsiness of 12 hours duration. Temperature 103 deg. F. Neck resistance to flexion. Lumbar fluid clear, pressure 20 mm. Hg., cell count 2 lymphocytes. 20 cc. of convalescent serum were given intramuscularly. A rapid recovery. No paralysis.

5. September 18, 1931. J. R. Female. Aged 6 years. Irritability and drowsiness. Duration 24 hours. Temperature 103 deg. F. Neck and spine signs positive. Lumbar fluid clear, pressure 12 mm. Hg., cell count, 3 lymphocytes. 20 cc. of convalescent serum were given intramuscularly. A rapid recovery. No paralysis.

6. September 19, 1931. J. W. Female. Aged 15

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months. Sudden onset of a high fever and a convulsion this morning followed by drowsiness. Temperature 103 deg. F. Patellar reflexes absent. Neck and knee reflexes uncertain. Jerking and twitching of the right leg. White blood count 7,600. Lumbar tap dry. Cisterna fluid clear, pressure 20 mm. Hg., cell count 11. 20 cc. of convalescent serum were injected intraperitoneally. A rapid recovery. No paralysis.

7. September 23, 1931. A. A. Male. Aged 5 years. Headache, sore throat and vomiting the past 3 days. Drowsy today. Temperature 105 deg. F. Neck and spine signs positive. Lumbar fluid clear, pressure 24 mm. Hg., cell count 1 lymphocyte. Three successive doses of 20 cc. of convalescent serum were administered intraperitoneally at 12 hour intervals. A complete recovery followed a weeks convalescence. No paralysis.

8. October 3, 1931. K. M. Male. Aged 22 months. A coryza, vomiting and diarrhea 8 days ago, of 3 days duration. Better for 5 days. Left leg paralyzed (flaccid) today. Temperature 101 deg. F. Lumbar tap dry. Cisterna fluid clear, pressure 10 mm. Hg., cell count 126, 83 per cent lymphocytes. Three intraperitoneal injections of 20 cc. of convalescent serum were given at 12 hour intervals. After which the patient was paralyzed from the waist down. Only about one-third of the paralysis has disappeared when this was written.

9. October 6, 1931. K. B. Male. Aged 20 months. Vomiting and diarrhea of 24 hour duration. Drowsy. Temperature 102 deg. F. Lumbar tap dry. Cisterna fluid clear, pressure 12 mm. Hg.; cell count 2. 20 cc. of convalescent serum were given intramuscularly. The following morning the patient was still drowsy. His whole body seemed tense. Lumbar fluid turbid, pressure 20 mm. Hg., cell count 2,000. 30 cc. of spinal fluid withdrawn. Because of the high cell count, 15 cc. of antimeningoccic serum were given intrathecally. The patient's condition seemed no better the following day. Because no organisms were found, and because but 5 cc. of lumbar fluid were obtained, no more antimeningococcic serum was given. Not wanting to use the convalescent serum unnecessarily, 50 cc. of the father's whole blood were injected intraperitoneally. Encouraged by a distinct improvement in the patient's condition, 25 cc. of the father's blood were administered intraperitoneally, each of the following two days. A rapid recovery followed. No paralysis.

10. October 9, 1931, D. E. Male Aged 3 years. Headache, abdominal pain, and vomiting of 3 day's duration. Very drowsy the past 24 hours. Reflexes diminished. White blood count 9,150. Lumbar fluid clear, pressure 12 mm. Hg.; cell count 37, polymorphonuclears 80 per cent. 20 cc. of convalescent serum were given intraperitoneally. Twelve hours later the patient was still drowsy, and the lumbar fluid cell count was 105. Two more doses of convalescent serum were given intraperitoneally. The patient rapidly recovered. No paralysis.

11. October 11, 1931. D. B. Female. Aged 3 years. Vomiting, restless and irritable during the night. A convulsion this morning. Now drowsy. Temperature 105 deg. F. Neck and spine signs positive. Lumbar fluid clear, pressure 12 mm. Hg.; cell count 2. 20 cc. of convalescent serum were given intraperitoneally. Eight hours later the lumbar fluid was turbid, pressure 12 mm. Hg.; cell count 6,374, polymorphonuclears 91 per cent. No organisms were found. 20 cc. more of convalescent serum were injected intraperitoneally. The following morning the child's general condition appeared no better, but the lumbar fluid cell count was 3,355. 60 cc. of whole adult blood were administered intraperitoneally. The patient's condition seemed much better the next day. The lumbar fluid cell count was 1,150. 50 cc. more of adult blood were given intraperitoneally. The following day the spinal fluid cell count was 144. From then on the patient made an uneventful recovery. No paralysis.

12. October 15, 1931. M. S. Female. Aged 6 years. A coryza and cough the past week. Vomiting and diarrhea the past 2 days. A severe headache this morning. Neck and spine signs positive. Temperature 103 deg. F. White blood count 27,000. Lumbar tap dry. Cisterna fluid turbid, pressure 12 mm. Hg., cell count 126. 50 cc. of the father's whole blood were given intraperitoneally. The child remained drowsy and vomited frequently during the day. Eight hours later the lumbar fluid was turbid. The cell count was 3,200 (polymorphonuclears 95 per cent). No organisms were found. 15 cc. of antimeningococcic serum were administered intrathecally. The patient sweat profusely through the night. The following morning her condition seemed better. The white blood count was 35,000. The cisterna fluid was turbid; the cell count was 1,713. 45 cc. of cisterna fluid were slowly withdrawn. Because of the improvement in the patient's condition and the uncertainty of the diagnosis, 30 cc. of antimeningococcic serum were administered intracisternally, and 50 cc. of the father's whole blood were injected intraperitoneally. The next day the child's condition seemed much better. But 3 cc. of lumbar fluid were obtained; cell count 1,200. The following day 45 cc. of clear lumbar fluid were removed, cell count 635. Except for a serum reaction one week later, the patient made an uneventful recovery. No paralysis.

13. October 10, 1931. L. M. Male. Aged 7 years. Headache and vomiting of 3 days duration. Quite irritable and drowsy the past 24 hours. Temperature 105 deg. F. Neck and spine signs positive. Lumbar fluid clear, pressure 16 mm. Hg.; cell count 230. Because no convalescent serum was at hand, 25 cc. of the father's whole blood were given intraperitoneally. Two intraperitoneal injections of 20 cc. of convalescent serum were given the next day. A rapid recovery followed. No paralysis.

14. October 16, 1931. E. F. Female. Aged 4 years. Felt bad one day a week ago. She then seemed all right until last night. Cried with pain in her back during the night. Temperature 101 deg. F. Neck and spine signs positive. Lumbar and cisterna taps dry. 20 cc. of convalescent serum were given intraperitoneally. Eight hours later 30 cc. of clear lumbar fluid were obtained, pressure 28 mm. Hg.; cell count 165, 20 cc. more of convalescent serum were given intraperitoneally. The following morning the child was still quite irritable and spastic, and was vomiting. 20

cc. more of convalescent serum were given intraperitoneally. The patient then made a rapid recovery. No paralysis.

DISCUSSION

The cases herein reported although small in number, do portray the clinical signs and symptoms one finds in cases of preparalytic poliomyelitis. They also illustrate the diagnostic difficulties one encounters in this type of cases. One may make a definite diagnosis of poliomyelitis in only the two cases which were and are paralyzed. The two cases with such extremely high cell counts were very probably meningitis rather than poliomyelitis. It is of interest, however, that one of them cleared up entirely with no other therapy than convalescent serum and adult blood. In my opinion, the important point in both cases is that they were treated early. Just how many of the ten others were cases of preparalytic poliomyelitis, I do not know. Nor do I know how many of them, if any, would have become paralyzed, if they had not received the serum or blood therapy.

Experimental and clinical pathology is teaching us that acute poliomyelitis is primarily a systemic infection which involves the central nervous system in only a small proportion of cases. "Flexner and Amoss have demonstrated that under normal conditions, the tissues of the choroid plexus and meninges possess a definite barrier-like power for excluding from the spinal fluid foreign substances or toxins circulating in the blood. Their experiments clearly indicate that an inflammatory reaction involving the delicate meningeal and choroid structures diminishes or destroys the defensive mechanism. It appears that injury to the meningo-choroid tissues is necessary to produce the fully developed disease."[1] The earliest changes are a hyperemia in the meninges, the cord, and the brain. These first changes are not associated with fibrin formation or with any cellular exudate. At this stage, one obtains on spinal puncture, an increased pressure and volume, but no increase in cells. Further progression of the disease results in an edema, a cellular exudate, and punctate hemorrhage in the cord, and possibly in the brain. One then finds on spinal puncture, a decreased pressure and volume, and an increased cell count.

Whether the apparent beneficial results that follow the clinical use of convalescent and human serum are due solely to specific antiviral potency, or whether they are partially or wholly due to a non-specific protein effect remains to be determined. Whatever its virtue, extensive clinical experiences of various observers have shown that to be of any real value, the serum must be given before the virus has involved the central nervous system. We are told that "the establishment of the diagnosis of acute poliomyelitis during the preparalytic stage is essential for the prevention of the dreaded incapacitating sequellae of the disease."[2] But for the average physician that is easier said than done. It seems to me that if any material progress is to be made in the prevention of these dreaded sequellae, some method should be adopted which the rank and file of the profession can utilize. There is no definite way of differentiating preparalytic poliomyelitis from a meningismus, or an encephalitis, or occasionally a meningitis. The history, the clinical signs and symptoms, and the spinal fluid findings are suggestive. But the fact remains, that one cannot without fear of contradiction diagnose acute poliomyelitis without the presence of paralysis. I believe that instead of waiting to make a definite diagnosis in each case before instituting therapy, one should have in mind prevention rather than specific treatment. For example, during "poliomyelitis season" (May to November) and especially during an epidemic, one should perform a spinal puncture on each patient that shows signs of meningeal irritation. If one finds an increased pressure and volume, or an increased cell count, would it not be sound prophylactic therapy to administer convalescent serum or adult blood until its further use is contraindicated? In emergencies one might be justified in administering serum or blood without waiting for the spinal fluid findings. It is true, perhaps, that many of these children would escape paralysis, with no treatment, or with spinal drainage. But how are we to know which one will, and which one will not? We do not withhold the administration of antitetanic serum to an individual with a dirty wound, because we are not certain that he would develop tetanus. Nor do we wait for a positive culture before administering antitoxin to cases of suspected diphtheria. The fact that one might not be justified in quarantining mild cases, may be considered an objection to such a procedure. However our present methods

of quarantine are far from satisfactory. Draper[3] has pointed out that one of the most pressing unsolved problems in connection with poliomyelitis is the exact mode of transmission of the infection. "This problem must for the present remain unanswered, since the suspected healthy carrier and the unrecognized mild case constitute a combination which defeats the ends of anything short of absolute quarantine of entire families. Furthermore, the possibility of food and milk-born infection, added to the well-established fact of direct transmission from person to person, renders successful epidemic control of the disease practically impossible."

The physicians of Illinois are indebted to the State Department of Public Health for making convalescent serum available. The maintenance and the distribution of the supply of serum is expensive, and therefore, one should not waste it, but should attempt to use it intelligently. When one is in doubt whether the serum is indicated, or if it is not available, the majority of observers are agreed that one is justified in the use of serum or whole blood from normal adults. It seems to me that, until more satisfactory methods of diagnosis, immunization and treatment are devised, that such therapy is more than justified, that it is clearly indicated. What would we do, if it were your child, or my child? Our patients should receive that same consideration.

The question whether serum should be introduced intrathecally is still open. If "the changes in the cerebrospinal fluid indicate that the choroid plexus barrier has already been broken down, it seems likely that the virucidal serum will reach the parenchyma of the spinal cord with sufficient rapidity and concentration without subjecting the patient to the possible dangers of the meningeal cellular response which usually follows the introduction of serum by the lumbar route, the so-called aseptic meningitis."[4] The intravenous route is considered by many to permit a sufficiently rapid effect. Intravenous therapy in small children, however, is difficult and is not without danger. Should one desire to inject larger quantities, the intraperitoneal route has its advantages. If given early, many observers believe that the intramuscular administration is as effective as any, and it is certainly the most practical one.

SUMMARY

Two cases of acute poliomyelitis, two of meningitis, and ten of suspected poliomyelitis are reported.

Convalescent serum or adult blood was used in 13 of the 14 cases.

A discussion of the pathology and spinal fluid findings in poliomyelitis, possible efficacy of convalescent serum and human blood, indications for their use, and the routes of administration.

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Jefferson Building.

DISCUSSION

Dr. H. J. Shaughnessy, Springfield: When the Illinois Department of Public Health decided some year and a half ago to collect and distribute convalescent serum for the prevention and control of poliomyelitis we thought that this form of theraphy was on a pretty sound basis, judging by the results which had been obtained in Massachusetts, Canada, Detroit, California, and other places; but during the last poliomyelitis season—that is, late in the summer and fall of last year—reports began to filter in from Dr. W. H. Park and Dr. Kramer that the results were not as satisfactory as had previously been thought.

We decided therefore to send out questionnaires to the physicians who had used convalescent serum in Illinois to see what they thought about this form of treatment. Altogether we sent out sufficient serum from the department to treat approximately 250 cases. Almost the same amount was sent out from the Convalescent Serum Center in Chicago, which is a separate institution cooperating with the State Department of Health. In other words, serum was used in about three-quarters of the reported cases in Illinois.

Answers to the questionnaires were received from over 300 physicians, about 200 of whom had used serum and 100 had not. It was soon apparent that no accurate comparison could be made between the two groups.

The very first thing that we found was that the physician had been called in, on the average, a full day earlier in cases treated with serum than those not treated with serum. In other words, the reason that a good many cases had not been treated with serum was that paralysis had already been present before the physician was called, or he felt that the onset of paralysis was merely a question of time anyway; it was so late in the course of the disease.

At any rate, even disregarding this, it might interest you to know what was obtained in the treated series as compared with the untreated series. We found that no paralysis had ensued at any time in about 44 per cent. of the cases receiving convalescent serum, and

that only 12 per cent. in this group had paralysis of the severe type. Of the cases not receiving convalescent serum only 9 per cent. never showed paralysis and 22 per cent. showed paralysis of the severe type. The mortality rates in the two groups were almost identical.

In the serum-treated group, approximately 60 per cent. recovered without paralysis; and in the untreated group, 22 per cent. recovered without paralysis. In other words, judging from these figures the chances of recovery without any paralysis were about three times greater in the serum-treated group, remembering always the limitations on this comparison which I have brought out.

It seems from that and from a comparison of the types of cases which were treated, that serum treatment was of considerable value. We recognize that the good results in the treated cases were due to the factor which Dr. Barbour has already mentioned, the difficulty in making diagnosis, and the fact that a good many cases which were probably not poliomyelitis were included in the serum-treated cases. That that is not true to any great extent we think can be proved by a comparison of the symptoms in the two groups.

We find that the symptomatology in the treated and untreated groups was almost the same in per cent. and that lumbar punctures were made in about two-thirds of the cases where serum treatment was used. In other words, serum was not being administered merely on suspicion but after very careful study of the case; 53 per cent. of all the cases showed a positive spinal fluid at some time.

We feel therefore that in view of these results, and until it can be shown that convalescent serum is definitely harmful in its results, it is worth while to continue the collection of convalescent serum for distribution and use by the physicians in Illinois.

In that connection I should like to stress another thing which Dr. Barbour mentioned. After all, we are not making a scientific experiment in these studies. We are trying to prevent the after effects of poliomyelitis, and we cannot expect to do that if we wait to make an absolutely certain diagnosis, as Dr. Barbour has brought out.

Dr. F. G. Norbury, Jacksonville: It seems to me that Dr. Barbour's paper and Dr. Shaughnessy's discussion brought out two rather important points with respect to poliomyelitis in Illinois. Some of us have been interested especially in poliomyelitis for quite a few years, and some ten or eleven years ago, when we had an epidemic, demands for summarizing some of our findings and reporting some of the observations were made.

During this past epidemic in 1931 the fact that there was this rather widespread demand for serum, as Dr. Shaughnessy pointed out, has shown that physicians are thinking more of acute poliomyelitis in the pre-paralytic stage as the disease. This is an important thing from the standpoint of the clinician, from the standpoint of the care of the patient, and from the standpoint of certain effects so far as prevention of the complication of the disease—paralysis.

Ten years ago many of us did not make the diagnosis until the paralysis had appeared. It would be much the same as waiting to make the diagnosis of typhoid fever when perforation had occurred, or of diphtheria by post-diphtheritic paralysis. Now we have a rather definite clinical entity as brought out by Dr. Barbour in his delineation of the findings by which it appears that the diagnosis of the pre-paralytic stage can be made.

As I say, Dr. Shaughnessy's report shows that physicians over the state are making that diagnosis and are asking for serum for use in the treatment.

That there is also greater general recognition of the pre-paralytic stage as the disease itself is shown, I think, at the meeting of the American Medical Association in New Orleans last week. Those of you who were there had the privilege, as I did, of seeing that wonderful portion of the scientific exhibit by a special committee of the A. M. A. on poliomyelitis. We had the opportunity to hear Aycock, Kramer, Gordon, Shaw, —men whose work on poliomyelitis, both from the clinical and experimental standpoints, is standing up. We had the opportunity to see the charts, to see motion picture demonstrations. Then one whole afternoon of the Section on Pathology and Physiology was given over to a symposium on poliomyelitis.

The men whom I have mentioned, Dr. Park and others, gave the papers and gave to those who were there the report of their findings.

One of the interesting things to me in that discussion —and I believe that it might be supplementary to Dr. Barbour's report—was that the studies in experimental poliomyelitis, in which our own Dr. Shaughnessy in Illinois has participated and to which he has contributed much—have shown that the early lesions are direct lesions of the anterior horn cell. Most of us who have had the opportunity to see autopsy findings have seen the perivascular cuffing, have seen the changes that have been generally described; but the fact that, by the experimental study of the disease in monkeys, the early changes in the nerve cells themselves can be demonstrated is, I believe, an important thing in forwarding knowledge of the mechanism of the infection in the course of the disease.

As to methods of treatment or methods of introduction of the serum, that, I believe, is less important than the fact of early use of the serum. Dr. Barbour, through his pediatric experience, is familiar with the introduction of serum and solutions intraperitoneally. Some of us who are interested in neurologic conditions are perhaps more accustomed to using intraspinous medication.

The fact that Shaw and the other workers in California in their series used intramuscular injection and secured quite satisfactory results shows that the method there is adequate and that it is not necessary to wait for the utilization of some of these special procedures.

In regard to the possibility of the development of an aseptic meningitis that Dr. Barbour mentioned, Shaw has said in the pamphlet that was produced and prepared for the exhibit that this aseptic meningitis may or may not be a disadvantage. In our own experience

in using sera intraspinously, in practically every instance combined, as a rule, with intramuscular administration, we have not had any difficulties that we thought were unfavorable reactions from intraspinous therapy.

This conclusion, I think, might be stated on the basis of the study of the literature, and also I would say from personal experience, that Dr. Barbour had diagnosed poliomyelitis in many of these cases that he had called suspected poliomyelitis, that his prompt use of the various therapeutic measures had given relief. This also may be added: that when paralysis has appeared then there is not much use to give sera unless the temperature is still elevated or new paralyses or new evidences of weakness indicating that the disease is still active are shown to be present. Thank you for the opportunity of discussing this.

Dr. E. S. Gillespie, Peoria: I want to say a few words to emphasize what Dr. Barbour has said about the difficulty of diagnosis. I know at least half of these cases, this series of 20 that he has—I think possibly more than that—and we saw some of them early. They were practically all hospitalized, and we had all the facilities at our command to make the diagnosis, and yet we were not able to be sure. In every case, however, where they were treated we guessed that they were anterior poliomyelitis cases and treated, as he said, with the results that he gave.

There were just three cases in Peoria during this last epidemic about which I want to speak and which will emphasize the difficulty of diagnosis.

The first case that we had in Peoria last July was an adult female 43 years of age. The diagnosis was never made until Dr. Bohrod, I think, did it from the autopsy. It was the bulbar type, and the most virulent type, and she died without the diagnosis having been made, on the forth day after onset.

About a week later there was another adult female 27 years of age who had all this chain of symptoms that Dr. Barbour has told you about, and she collapsed in the backyard. We got her into the house, and she had all those coarse tremors and her respiratory apparatus was in very bad condition. Her respirations were about 5 to 5-½ to the minute and she looked as though she might die any time. 20 cc.'s of convalescent serum were given intravenously. That was about nine o'clock in the morning and it was repeated again at nine o'clock in the evening. The woman recovered without any paralysis and made an uneventful recovery.

There was another case and it happened to come to the St. Francis Hospital the day that Dr. Houston was there to get blood to make convalescent serum. I saw the case, and Dr. Houston and two other doctors in Peoria saw the case, and we all agreed that it was poliomyelitis. The convalescent serum was given, I think three doses; the child went right ahead and died. That case went to autopsy, and I think that Dr. Bohrod did that one too.

The findings at autopsy were a purulent pericarditis, a psoas abscess, and several other things. With all the things that we had to work on we all felt that we were justified in pronouncing this a case of anterior poliomyelitis, and yet we were a thousand miles from being right. Those are the mistakes that can be made. This child had a temperature of 104, was unconscious, and in very bad condition Those three cases happened in Peoria within about a month and a half.

I do feel that if we are ever going to do any thing for these cases we must give the treatment without waiting for a positive diagnosis.

THE LENS-ANTIGEN EXTRACT TREATMENT OF CATARACT

The experience of Dr. A. E. Davis, of New York City, in the use of anti-lens serum and lens-antigen extract in the treatment of cataract now extends over ten years. In *Am. Med.*, Jan., 1932, he reviews the whole subject and reaches the following conclusions:

1.—*Subcapsular senile* cataract is the most favorable type for the treatment; in the very early stages (incipient), 80 to 85 per cent. (81.47 percent. in this series of cases) can be improved or arrested and retarded in their progress, the lens opacities being reduced and the vision improved. Even in immature cases the percentage is 55.31 per cent.

2.—*Cortical, including posterior cortical* types are the next best suited for the treatment and, in the incipient cases, about 75 per cent. can be improved or arrested.

3.—*Nuclear, Sclerosing* (black) and capsular cataracts are not influenced by the treatment, and in such cases it should not be given.

4.—In all types with vision less than 20/70, except in very old and feeble patients in whom an operation is not feasible, the remedy should not be given.

5.—*Early diagnosis and early active treatment* are of paramount importance in stopping the progress of cataract formation.

6.—All presbyopes, when coming for their first glasses, should be examined carefully for lenticular opacities (cataract), in order that early active treatment may be instituted.

7.—The percentage of cases improved and arrested by the lens-anigen is much greater than that obtained by a careful refraction and simple hygenic treatment.

8.—Since it is possible, in the early cases, to stop the progress of cataract, the people generally should be as acquainted with the fact as they are now with the necessity for early treatment of cancer and tuberculosis and diabetes. Early diagnosis and active treatment in cataract is of just as much importance as in the above dreadful diseases.

9.—In this day of *preventive medicine,* patients with cataract should at least be given a chance to retain useful vision and not allowed to drift along, as is usually done now, until the sight is lost, and an operation, not always successful, has to be performed.

Housewife (to garbage man)—Am I too late for the garbage?

G. M.—No ma'am; jump right in.—*N. U. Purple Parrott.*

Society Proceedings

BOND COUNTY

At the meeting, December 16, at Greenville, Doctors from Highland, Vandalia, Ramsey and St. Elmo were present. Dr. Neil S. Moore of St. Louis gave a lantern slide lecture on "Obstruction at the Neck of the Bladder" and the technic and instruments for its treatment. Dr. W. C. Gaylor, also of St. Louis, gave a paper on "Indications for Cesarean Section." The Society extended a vote of thanks to both distinguished Doctors.

The society elected the following officers for 1933: D. T. Brown, president; K. B. Luzader, vice-president; W. T. Easley, secretary-treasurer; Drs. L. J. Cordonier, R. Wilkus and W. L. Hall, delegates to State Society, and K. B. Luzader, alternate to Dr. Hall. One new member was admitted to membership.

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, December 7, 1932

PUBLIC HEALTH

Health Education Through the Press
Mr. Robert M. Lee, City Editor, Chicago Tribune.

Health Education Over the Radio
Dr. W. S. Bauer, Director, Bureau of Health and Public Instruction, American Medical Association.

Health and Life
Dr. Louis Mann, Chicago Sinai Congregation.

Regular Meeting, Wednesday, December 14, 1932

GENERAL PRACTITIONER'S NIGHT

Symposium on Pediatrics

Causes of Obscure Fever in Infancy and Childhood .....Charles Schott

Causes of Pus in the Urine in Infancy and Childhood .....John A. Bigler

The Present Status of Serum Therapy in Pediatrics .....Julius H. Hess

Discussion: George E. Baxter, Robert A. Black, Isaac Abt, Joseph Brennemann, Clifford Grulee

GREENE COUNTY

The regular quarterly meeting was held in Roodhouse, December 9, 1932.

After a nice chicken dinner in Oak Cafe the meeting was called to order at 7:00 P. M. in the dining room by the president, Dr. A. R. Jarman. At the suggestion of the secretary the business session was postponed until after the scientific session. Dr. A. R. Jarman read a very systematic and thorough paper on "Digitalis." Its origin, effects, indications, precautions necessary in its use and other valuable points were treated of by the writer. The discussion was general and showed that all the physicians present were interested in this valuable drug.

Miss Ware of the State Department of Public Welfare gave an instructive talk on the manner of putting on a campaign for diphtheria immunization, which can also be followed in campaigns for typhoid and smallpox prevention as well.

Routine business was disposed of and the following officers were elected for the year of 1933: president, Dr. O. J. Gause of White Hall; vice president, Dr. E. E. Jouett of Carrollton; secretary-treasurer, Dr. W. H. Garrison of White Hall; censor, Dr. O. L. Edwards of Roodhouse.

Dr. L. E. Demke of Eldred was elected to membership. Ten members and visitors were present. Next meeting in Carrollton, March 9, 1933.

—W. A. Garrison, Sec'y.

McLEAN COUNTY

At the meeting, December 13, in Bloomington Dr. J. C. McNutt was elected president for the year beginning June 1, 1933. Dr. James Jensen of Saybrook was named vice-president and Dr. Ralph P. Pearis, Normal, was re-elected secretary-treasurer.

Dr. M. F. Engman, professor of dermatology at Washington university, St. Louis, spoke at the Illinois hotel, following a clinic which he conducted at Brokaw hospital from 4 to 6 p. m. Tuesday on the subject of dermatology. Dr. H. W. Grote, president of the society, arranged and managed the clinic. Mrs. Engman was entertained Tuesday night at a buffet supper at the home of Dr. and Mrs. H. L. Howell, 410 East Front street, by the women's auxiliary of the medical society. Mrs. Gerald M. Cline is president of the auxiliary and Mrs. Grote, secretary.

The medical society went on record as in favor of its members following the practice of former years in caring for indigent persons in need of medical aid. A number of indigent cases are cared for annually, it was said.

TRAINING PERIOD FOR MEDICAL DEPARTMENT RESERVE OFFICERS OF ARMY AND NAVY

From February 12 to 25, 1933, there will be a training period for Medical Department Reserve Officers of the Army and Navy, made possible at the University of Washington Medical School, St. Louis, Missouri, by the courtesy and enthusiasm of the faculty of this school in cooperation with the Medical Departments of the Army and Navy.

While this is classed as an "inactive duty period" and is without pay or allowances to the participants, the time spent is recognized for the same credits as though it were an "active duty" period. The exceptional clinical advantages of this great medical center, combined with the advanced military and naval training, make possible a very profitable two weeks. The training is open to all Medical Depart-

ment Officers of the Army and Navy reserves, or the National Guard.

The program of the clinics will be under the direct supervision of the faculty of the Washington University. The military instruction, which for the first time includes instruction with reference to the medical service of the Navy, will be under the direct supervision of Colonel George A. Skinner, Medical Corps, United States Army, Corps Area Surgeon, assisted by Lieutenant Commander Reuben H. Hunt, Medical Corps, United States Navy.

Applications for attendance should be forwarded to the Surgeon, Seventh Corps Area, Baird Building, Omaha, Nebraska.

Marriages

Clyde F. Baccus to Miss Helen Louise Miller, both of Woodstock, Ill., October 25.

William J. Blackard, Jr., to Miss Irene Travis, both of Harrisburg, Ill., in Louisville, Ky., November 19.

Henry I. Chapman to Miss Sylvia Eppenstein, both of Chicago, November 10.

Joel A. Peterson, Urbana, Ill., to Miss Genevieve Nelson of Red Wing, Minn., in Decatur, Ill., October 15.

Walter J. Siemsen, Chicago, to Miss Helen Hekman of Grand Rapids, Mich., October 29.

Personals

Dr. C. R. Wegner of St. Louis addressed the Monroe County Medical Society on "Toxemias of Pregnancy" Nov. 17.

Dr. Frank Buckmaster, Effingham, was elected president of the Central Illinois Medical Society at its fifty-seventh semiannual meeting in Pana, November 29.

Dr. Ralph T. Hinton, managing officer of the Manteno State Hospital, observed his twenty-fifth anniversary with the state department of welfare, November 22.

Dr. Bernard Fantus, Chicago, addressed the Kankakee Medical Society and the Kankakee State Hospital staff, December 1, on "Therapy of Colon Stasis."

Dr. Frank J. Jirka has been appointed medical superintendent of the House of Correction, succeeding Dr. Charles E. Sceleth, who retired after thirty-three years' service.

Dr. Chauncey C. Maher has been appointed assistant professor of medicine at Northwestern University Medical School.

Dr. Gerry B. Dudley, Charleston, was elected president of the Wabash Valley Aesculapian Society, succeeding Dr. Otto R. Spigler, Terre Haute, Ind., at its annual meeting in Paris, November 2.

Dr. Clarence O. Sappington has resigned as director of industrial health of the National Safety Council, and will engage in private practice as a consultant in industrial hygiene.

Dr. John S. Sweeney has resigned as house physician at the Palmer House after thirty years' service, on account of ill health. Dr. Edward F. Addenbrooke succeeds him.

Edwin O. Jordan, Ph.D., addressed the seventeenth annual meeting of the Institute of Medicine of Chicago, December 6, on some problems in epidemiology.

Dr. Evarts A. Graham, St. Louis, delivered the E. R. DeBoth Lecture in Surgery, December 16, at Rush Medical College, on "The Story of the Development of Cholecystography."

Dr. Charles Marshall Davison, Chicago, addressed the Will-Grundy County Medical Society, November 23, on "Recurrent Cholecystitis Following Cholecystotomy."

The "silver beaver" award of the Boy Scouts of America was recently conferred on Dr. Warren E. Taylor, Moline. The award is made each year to the man in the Moline area who has shown "distinguished service to boyhood," the report stated.

Dr. Thomas McCrae, Philadelphia, addressed a joint meeting of the Society of Medical History of Chicago and Northwestern University, December 1, on "Osler: Teacher and Physician."

"All you need to get back to the farm," says a writer, "is backbone"—and some liniment to rub on it.—*Palatka (Fla.) News.*

Tommy (to Aviator): "What is the most deadly poison known?"

Aviator: "Aviation poison."

Tommy: "How much does it take to kill a person?"

Aviator: "One drop."

—*The High Twelvian.*

News Notes

The Chicago Gynecological Society was addressed, December 16, by Drs. Lloyd L. Arnold on "Relation of Season and Constitutional Type to Menstruation" and William F. Petersen, "Biochemical Alterations and Their Relation to the Menstrual Cycle."

Among the speakers before the North Central Illinois Medical Society in Pontiac, December 6, were Drs. Emil Z. Levitin, Peoria, on "Post-encephalitic Respiratory Syndromes," and Andy Hall, Springfield, state health officer, "Venereal Diseases as a Public Health Problem."

The Chicago Society of Internal Medicine was addressed, December 19, by Drs. Robert E. Johannesen on "Parathyroid Tetany," and James B. Graeser, Chicago, and Ching Wu, Peiping, China, "A Comparison of Physical Findings and X-Ray Signs of Lobar Pneumonia."

Officers of the Institute of Medicine of Chicago, recently elected for the ensuing year, include Drs. Ludvig Hektoen, chairman of the board of governors; Isaac A. Abt, president; Basil C. H. Harvey, vice president; George H. Coleman, secretary, and John Favill, treasurer.

Speakers before the Stephenson County Medical Society, Freeport, November 30, included Drs. Albert H. Montgomery, on "Surgery of Acute Abdominal Conditions in Children"; Frederick H. Falls. "Unusual Complications in Pregnancy," and Charles A. Elliott, "Management of Hepatic Disease." The speakers were from Chicago.

At a joint meeting of the Chicago Dermatological Society and the Society of Medical History of Chicago, December 16, Dr. John E. Lane, New Haven, Conn., spoke on "Jean Deveze, Stephen Girard, Benjamin Rush and the Yellow Fever Epidemic in Philadelphia in 1793," and Dr. William Allen Pusey, "Noah Worcester: Pioneer Internist and Dermatologist in the Middle West."

The Bureau County Medical Society, Princeton, celebrated its fortieth anniversary, November 7, with an orthopedic clinic and scientific program. Dr. Hugh E. Cooper, Peoria, conducted the clinic, and Drs. James H. Hutton and Nelson M. Percy, Chicago, spoke on "Thyroid and Ovarian Disturbances at Puberty and the Menopause" and "Goiter," respectively.

A room especially designed to save eyesight will soon be established in a public school as a gift from the Chicago Woman's Aid in honor of its fiftieth anniversary. According to the Chicago *Tribune,* the room, which is to accommodate about forty children, will be specially lighted and decorated, and special typewriters and other equipment will be supplied. Children's eyes will be tested and fitted with glasses by a physician.

According to the State Department of Health, until November 1 the number of cases and deaths reported for influenza were below the totals for the same period in 1931. However, during November, fifty-five cases with twenty-two deaths were recorded, as compared with thirty-three cases and thirteen deaths for 1931. For the week ended December 9, seventy-five cases were reported, as compared with eleven for the corresponding period of 1931. Nineteen deaths were noted, as against four of the period in 1931.

The Decatur Medical Society observed the completion of fifty years in the practice of medicine of Dr. Frank M. Anderson at its meeting, December 2. The guest of honor was presented with a gift of flowers, following a review of his career by Dr. Wilbur Wood. Dr. Anderson, who has practiced in Decatur thirty-three years, was president of the society in 1921. Officers elected at this meeting are Drs. Ansel O. Magill, president; Herbert E. Parsons, vice president, and Dwight A. Pence, secretary. They will assume office in January.

Dr. Edgar C. Cook was elected president of the North Central Illinois Association at the 59th annual meeting at Pontiac. Dr. Cook succeeds Dr. Arthur Springer of Peoria. The other officers elected were: Dr. H. A. Millard, Minonk, first vice president; Dr. Peter H. Peppen, Princeton, second vice president; Dr. George A. Dicus, Streator, secretary-treasurer. Dr. Cook served as vice president of the organization last year.

Thirteen private hospitals in Chicago made available, December 12, 400 free beds for those of the sick poor denied admission to the overcrowded Cook County Hospital. The cost of hospitalization for these persons, which is not to exceed $3.75 a day, will be borne by the Emergency Welfare Fund of Cook County.

Applicants will be received on recommendation of the county department of public welfare or any recognized social agency, the Chicago *Tribune* reported. The institutions which offered beds are Augustana, Grant, Chicago Lying-In, Lutheran Deaconess, Michael Reese, Mount Sinai, Passavant, Presbyterian, Provident, St. Elizabeth's, St. Luke's, St. Mary of Nazareth and the Women's and Children's hospitals. The movement to provide beds in private institutions was begun to relieve the over-crowded condition of the county hospital, which is caring for about 2,900 patients, whereas its normal capacity is 2,500. Free hospitalization will greatly increase the expenditures of health service of the emergency welfare fund, it was stated, which, at present, has $1,100,000 set aside for this purpose.

The American Association for the Study of Goiter, for the fourth time, offers Three Hundred Dollars ($300.00) as a first award, and two honorable mentions for the best three essays based upon original research work on any phase of goiter presented at their annual meeting in Memphis, Tenn., May 15th, 16th, and 17th, 1933. It is hoped this will stimulate valuable research work, especially in regard to the basic cause of goiter.

Competing manuscripts must be in English and submitted to the Corresponding Secretary, J. R. Yung, M.D., 670 Cherry St., Terre Haute, Indiana, U. S. A., not later than April 1, 1933. Manuscripts arriving after this date will be held for the next year or returned at the author's request.

HOW TO KILL A MEDICAL SOCIETY

Don't come to the meetings. If you do come, come late. If the weather doesn't suit you, don't think of coming. If you do attend a meeting, find fault with the work of the officers and other members. Never accept office, as it is easier to criticize than to do things. Nevertheless, get sore if you are not appointed to a committee; but if you are, do not attend the committee meetings.

If asked by the chairman to give your opinion regarding some important matter, tell him you have nothing to say. After the meeting, tell everyone how things ought to be done. Do nothing more than is absolutely necessary, but when other members roll up their sleeves and willingly and unselfishly use their ability to help matters along, howl that the organization is being run by a clique. Hold back your dues as long as possible, or don't pay them at all. Don't bother about getting new members.—*The Aesculapian.*

Deaths

Benjamin Abner Arnold, Freeport, Ill.; Rush Medical College, Chicago, 1895; a Fellow, A.M.A.: past president of the Stephenson County Medical Society; on the staffs of St. Francis and the Evangelical Deaconess hospitals; aged 70; died, November 24, of diabetes mellitus.

Charles John Besta, Chicago; University of Illinois College of Medicine, 1926; physician at Bridewell hospital; aged 36; died, December 24, of cerebral hemorrhage.

John Michael Bohan, Galesburg, Ill.; Northwestern University Medical School, Chicago, 1907; a Fellow, A.M.A.; on the staffs of the Galesburg Cottage Hospital and St. Mary's Hospital; aged 51; died suddenly, December 9, of coronary thrombosis.

Elmer E. Burton, Jacksonville, Ill.; Eclectic Medical Institute, Cincinnati, 1891; member of the Illinois State Medical Society; on the staff of the Jacksonville State Hospital; aged 67; died, December 12, in St. Anthony's Hospital, Effingham.

Willis Butterfield, Belvidere, Ill.; Chicago Medical College, 1872; aged 84; died, October 23, of paralysis agitans and myocarditis.

Alfred Leslie Casburn, Ferris, Ill.; University of Kansas School of Medicine, Kansas City, 1906; aged 49; died, November 25, of glomerular nephritis and hypertension.

John Wesley Davis, Hardin, Ill.; St. Louis College of Physicians and Surgeons, 1910; aged 59; died, August 8, in St. Mary's Hospital, St. Louis, of cerebral hemorrhage.

Thomas Jefferson Dunn, Dieterich, Ill.; Rush Medical College, 1881; a member of Illinois State Medical Society; oldest practicing physician in Effingham county; aged 86; died, November 25.

William Engelbach, Arenzville, Ill.; Northwestern University Medical School, Chicago, 1902; a Fellow, A.M.A.; member of the Medical Society of the State of New York; instructor in medicine, St. Louis University School of Medicine, 1906-1909, assistant professor, 1909-1911, and professor in medicine, 1911-1923; president of St. Louis Medical Society in 1918 and the Association for Study of Internal Secretions, 1922-1923; founder, and physician in chief of St. John's Hospital, St. Louis, 1909-1924; on the staffs of St. Louis City, Jewish and Maternity hospitals, and the Missouri Baptist Sanitarium; fellow of the American College of Physicians; served on the examining board for state of Missouri during the World War; author of "Endocrine Medicine," and other publications pertaining to endocrinology; aged 55; died, November 22, in St. John's Hospital, Springfield, Ill., of heart disease.

Mary E. Gregg, Chicago; Hahnemann Medical College and Hospital, Chicago, 1891; a medical missionary in Guatemala for ten years; aged 74; died, December 25, in Presbyterian hospital, from injuries received in a fall.

Christian Frederick Grimmer, Pekin, Ill., University of Michigan Medical School, 1901; a Fellow, A.M.A.; aged 61; died, December 9, of pneumonia.

Luther S. Hall, Oregon, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1876; aged 82; died, December 16, of arteriosclerosis and myocarditis.

Joseph Hallett, Bloomington, Ill.; Hahnemann Medical College and Hospital, 1878; a veteran of the Civil War; aged 89; died, November 13.

John Lawrence Jacques, Chicago; Rush Medical College, Chicago, 1896; formerly assistant professor of medicine at his alma mater; aged 61; died, November 14, of myocarditis and coronary thrombosis.

William Clay Jones, Chicago; Eclectic Medical Institute, Cincinnati; 1909; aged 48; died, October 30, in the Woodlawn Hospital, of cyanide poisoning, self-administered.

Joseph Lee Kerrell, Alton, Ill.; American Medical College, St. Louis, 1889; aged 76; died, November 2, of heart disease.

Charles P. Kinney, Crossville, Ill.; Cincinnati College of Medicine and Surgery, 1877; a pioneer resident of White county; aged 87; died, December 4, of chronic myocarditis.

Hanson Julius Kofoed, Chicago; Jenner Medical College, 1913; a former member of the Illinois State Board of Health and on the staff of Chicago State hospital and Elgin State hospital; aged 60; died, November 26, of chronic myocarditis.

Frank M. Mason, Danville, Ill.; Northwestern University Medical School, 1894; a Fellow A.M.A. and Fellow, American College of Surgeons; a member Tri-State Medical Society and the Aesculapian Medical Society of the Wabash Valley; surgeon of staffs of the Lakeview and St. Elizabeth's hospitals of Danville; aged 66; died, in Passavant Memorial hospital, December 24, of carcinoma of the pancreas.

Charles Otto Molz, Quincy, Ill.; Missouri Medical College, St. Louis, 1898; a Fellow, A.M.A.; fellow of the American College of Surgeons; aged 60; on the staff of St. Mary's Hospital, where he died, November 3, of agranulocytic angina, edema of the glottis and dilatation of the heart.

Milton Guy Owen, Springfield, Ill.; Hahnemann Medical College and Hospital, Chicago, 1894; a Fellow, A.M.A.; past president of the Sangamon County Medical Society; formerly member and president of the board of education; aged 60; on the staff of St. John's Hospital, where he died, November 12, of sepsis.

John A. Plumer, Trivoli, Ill.; college of Physicians and Surgeons, Keokuk, 1889; a Fellow, A.M.A.; aged 64; died, November 27.

Charles C. Ransom, Potomac, Ill.; Hahnemann Medical College and Hospital, Chicago, 1890; aged 72; died, November 24.

Paul Rudorf, Hinsdale, Ill.; Hahnemann Medical College and Hospital, Chicago, 1885; aged, 71; died, December 3.

Karl David Sanders, Jonesboro, Ill.; Ensworth Medical College, St. Joseph, 1908; veteran of the Spanish-American War; aged 52; died, November 4, in the Veterans' Administration Hospital, North Chicago, of arteriosclerosis.

Edward Allen Sickels, Dixon, Ill.; Hahnemann Medical College and Hospital, Chicago, 1897; a Fellow, A.M.A.; fellow of the American College of Surgeons; on the staff of the Dixon Public Hospital; aged 66; died, November 13, of carcinoma.

John Henry Spencer, Jacksonville, Ill.; National University of Arts and Science, St. Louis, county physician and health officer; a veteran of the Spanish-American and World Wars; aged 65; died, December 4, of heart disease.

Henry Albert Staib, Chicago; University of Illinois College of Medicine, Chicago, 1915; member of the Illinois State Medical Society; aged 40; was instantly killed, November 9, in an automobile accident.

Thomas John Sullivan, Chicago; University of Michigan, 1880; assistant professor of surgery in his Alma Mater several years; chief of staff, St. Bernard's Hospital, 1904-1912; major and surgeon of 7th regiment, Illinois National Guard, 1896-1916; a Fellow, American College of Surgeons; aged 76; died, December 17, of influenza and bronchopneumonia.

Hubert J. Straten, Chicago; Hering Medical College, Chicago, 1894; a Fellow, A.M.A.; Dunham Medical College, Chicago, 1895; aged 64; died, December 8, of heart disease.

John Aaron Taylor, Gridley, Ill.; Bellevue Hospital Medical College, New York, 1875; aged 82; died, November 1.

August G. Wilhelmj, Maeystown, Ill.; Marion-Sims College of Medicine, St. Louis, 1895; aged 61; died, October 28, of cerebral hemorrhage.

Simon Willard, Cobden, Ill.; Chicago Medical College, 1884; aged 73; died, October 24, of uremia and chronic cystitis with hypertrophy of the prostate.

James X. Willits, Chicago; Chicago College of Medicine and Surgery, 1916; aged 68; died, October 28, of pneumonia.

Frank G. Zilliken, Chester, Ill.; Homeopathic Medical College of Missouri, St. Louis, 1896; aged 58; was found dead, November 4, of heart disease.

4 New Concentrated Vitamin Products

SMACO

Vitamin A alone

Name: Smaco Caritol. Product No. 505.

Description: Caritol is a 0.3% solution of carotene in bland oil, providing a safe, palatable and convenient concentration of vitamin A for therapeutic use.

Taste: Entire absence of all fishy taste makes it acceptable to your patients.

Color: Deep red, due to carotene.

Potency: Ten drops contain one thousand International Units of vitamin A.

Dosage: Three to five drops daily for infants and young children. Five to ten drops daily for adults.

Package: 15 c. c. dropper-top, protectively-colored bottles, in special cartons to shield it from the light.

Cost: Because of its high potency and the small doses required, it is an inexpensive source of vitamin A, in spite of the fact that it is the *only* product containing vitamin A *alone.*

Indications: For conditions caused by vitamin A deficiency and cured or prevented by adequate vitamin A or carotene dosage.

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Name: Smaco Concentrated Vitamin D. Product No. 515.

Description: This product is Natural Vitamin D, being a highly potent extract of the antirachitic principle of cod liver oil.

Taste: Palatable and free from objectionable taste.

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Book Notes

Your Hearing and How to Preserve and Aid It. By Wendell Christopher Phillips, M.D., and Hugh Grant Rowell, M.D. New York. D. Appleton & Company. 1932. Price $2.00.

This volume begins with a description of the mechanism of the ear and the manner in which it operates in hearing and in the communicational thought, it covers the varieties and causes of hearing trouble in children and adults, and a careful statement is presented on the possibilities of remedial medical treatments.

Practical Obstetrics. By P. Brook Bland, M.D. Illustrated with 516 engravings, including 21 colored plates. Philadelphia. F. A. Davis Company. 1932.

This work is intended for students and practitioners. It provides the student with a concise text book, the practitioner with a dependable guide and the specialist with an exposition with the author's personal views on current obstetric problems.

Outline of Preventive Medicine prepared under the auspices of the committee on Public Health Relations New York Academy of Medicine. Twenty-four contributors. Second Edition revised and enlarged. New York. Paul B. Hoeber, Inc. 1932. Price $5.00.

Corrections of Defective Speech. By Edwin Burket Twitmeyer, Ph.D., and Yale Samuel Nathanson, Ph.D. Illustrated. Philadelphia. P. Blakiston's Son & Co. 1932. Price $3.50.

This is a complete manual of psycho-physiological technique for the treatment and correction of the defects of speech.

University Student Health Services. By Don M. Griswold, M.D., and Hazel I. Spicer, Chicago. University of Chicago Press. 1932. Price 90 cents.

This work is number 19 of the publication of the committee on the costs of medical care.

A Community Medical Service Organized Under Industrial Auspices in Roanoke Rapids, North Carolina. By I. A. Falk, Ph.D., Don M. Griswold, M.D., Dr. P. H. & Hazel I. Spicer, with reports of certain phases of the organization by David Riesman, M.D., and George P. Mueller, M.D. Chicago. University of Chicago Press. Price 90 cents.

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume 16, No. 3. (University of California Number, November 1932) Octavo of 195 pages with 31 illustrations. Per clinic year, July 1932 to May 1933. Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

The contributors to this number are Doctors Babcock, Bates, Billings, Block, Cornett, Crossan, Dever, Eliason, Gill, Howell, Klopp, Nassau, Owen, Pfeiffer, Randall, Rodman, Ryan, Thomas, Walkling, Widmann, Willauer, Wright.

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume 12, No. 6. INDEX NUMBER. (Philadelphia Number December 1932.) 280 pages with 110 illustrations. Per clinic year (February 1932 to December 1932). Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

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The Practical Medical Series General Medicine. Edited by George A. Weaver, M.D., Lawrason Brown, M.D., George R. Minot, M.D., William B. Castle, M.D., William D. Stroud, M.D., Ralph C. Brown, M.D. Series 1932. Chicago. The Year Book Publishers, Inc.

Medical Care for the American People. Final Report of the Committee on the Costs of Medical Care. October, 1932. Chicago. University of Chicago Press. Price $1.50.

Radiologic Maxims. By Harold Swanberg, B.Sc., M.D., F.A.C.P., Editor of The Radiological Review, Quincy, Illinois. With a foreward by Henry Schmitz, A.M., M.D., L.L.D., F.A.C.S., Professor of Gynecology and Head of the Department, Loyola University School of Medicine. Cloth. Price, $1.50, Pages, 126. Quincy, Illinois: Radiological Review Publishing Company, 1932.

This book is unique in that no similar book has previously been published and it covers the achievements in one of the most rapidly growing and interesting fields in medicine—Radiology. The book is on one of the medical specialties, it has been especially written to appeal to the practicing physician and surgeon.

Practical Medical Series the Eye. Edited by E. V. L. Brown, M.D., and Louis Bothman, M.D., and the Ear, Nose and Throat by George E. Shambaugh, M.D., and Elmer W. Hagens, M.D. Series 1932. Chicago. The Year Book Publishers, Inc.

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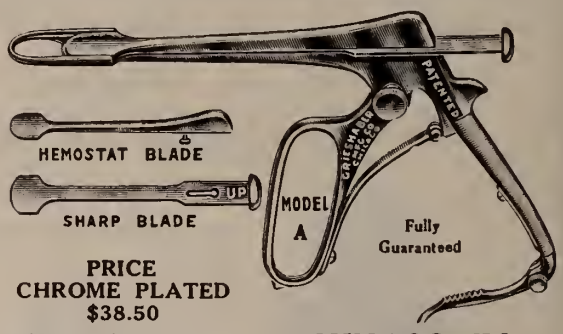
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ULTRAVIOLET RADIATION USEFUL FOR THERAPEUTIC PURPOSES: SPECIFICATION OF MINIMUM INTENSITY OR RADIANT FLUX

W. W. Coblentz, Washington, D. C. (*Journal A. M. A.*, July 9, 1932) points out that a recently introduced source of ultraviolet radiation that requires further physiologic tests is the so-called cold quartz lamp, in which about 95 per cent of the total radiation of wavelengths less than and including 313 millimicrons is emitted in the resonance line of mercury at 254 millimicrons (more exactly, 2,537 angstroms). The ultraviolet radiant flux, as well as the erythemogenic efficiency of such a lamp is relatively high. Nevertheless, in spite of its high erythemogenic efficiency, further biologic information is needed concerning its effectiveness in healing rickets and in the activation of ergosterol; for, according to published records, when the source of ultraviolet consists of wavelengths longer than 2,750 angstroms, over 60 per cent. of ergosterol is converted into vitamin D, whereas, if the lines at 2,537 and 2,654 angstroms are present, only a small amount of ergosterol is converted into vitamin D, after which a further exposure gradually destroys the vitamin D that was formed on first exposure. Since the publication of experiments on irradiation of cod liver oil, ergosterol and cholesterol, showing that wavelengths shorter than 280 millimicrons are destructive to vitamin D, the feeling is abroad that it is undesirable to use ultraviolet rays of wavelengths shorter than about 280 millimicrons for therapeutic purposes, especially in lamps sold for home use.

POISON IVY

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The U. S. Department of Agriculture has a bulletin on poison ivy, which it will send free of charge to anyone asking for it. It is listed as Farmers' Bulletin 1166-F.

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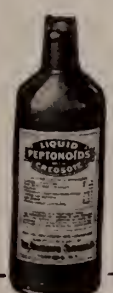


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EIGHTY-THIRD ANNUAL MEETING AT PEORIA, MAY 16, 17, 18, 1933

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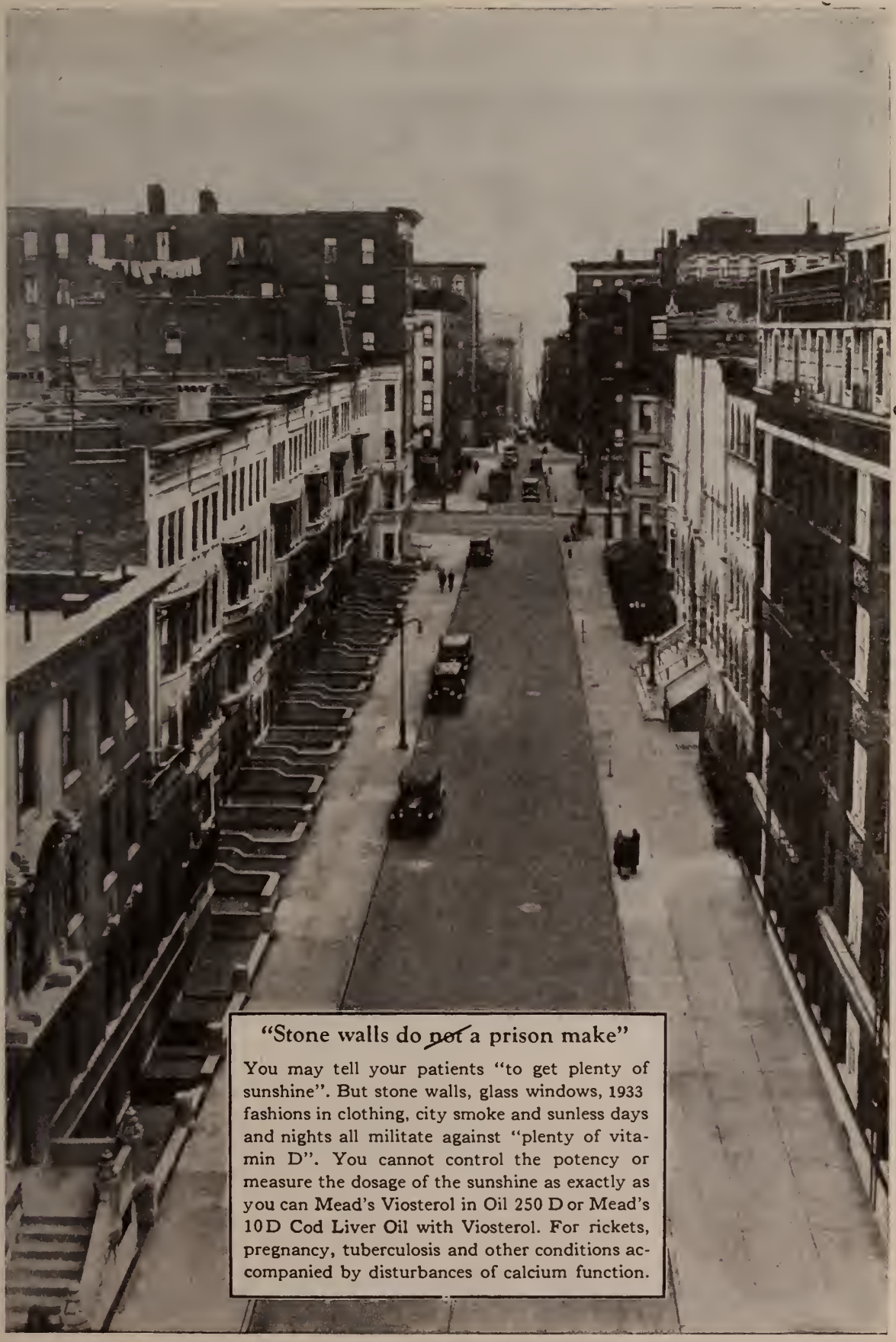
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The History of Dermatology. By Wm. Allen Pusey, A.M., M.D., LL.D., Professor of Dermatology Emeritus, University of Illinois. Sometime President of the American Dermatological Association and of the American Medical Association. Illustrated. Springfield, Illinois. Baltimore, Maryland. Charles C. Thomas. 1933. Price $3.00 Postpaid.

This work is beautifully printed, is beautifully bound containing 223 pages with 33 illustrations.

In this work Dr. Pusey tells the story dermatology from 300 B.C. to the present modern phase, there is a refreshing vividness to this narration of the notable personages and important episodes of dermatology.

The incorporation of an historical index, replete with factual data, adds greatly to the value of this source book.

The work is divided into nine chapters under the following headings:

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II Graeco-Roman, Arabian and Medieval Dermatology, Rome to the Renaissance, 300 B.C. to 1500 A.D.

III Dermatology in Early Modern Europe 1500 to 1750.

IV Dermatology Finding Itself, 1750 to 1825.

V Threshold of Modern Dermatology, Clinical Dermatology, 1800 to 1850.

VI Threshold of Modern Dermatology, Laboratory Dermatology, 1800 to 1850

VII Modern Dermatology, First Phase, Continental Europe, 1850 to 1900.

VIII Modern Dermatology, First Phase, Great Britain and the United States, 1850 to 1900.

IX Modern Dermatology, Present Phase, Since 1890.

Historical Index of Dermatology.

General Index.

Asthma, Hay Fever and Related Disorders. By Samuel M. Feinberg, M.D. Illustrated. Philadelphia. Lea & Febiger. 1933.

This work is intended as a guide for patients.

The Practical Medicine Series of Year Books. General Surgery. By Evarts A. Graham, A. B., M.D. Chicago. The Year Book Publishers, Inc. 1932.

Office Surgery. By Fenwick Beekman, M.D. 94 Illustrations. Philadelphia and London. J. B. Lippincott & Co. 1932. Price $5.00.

This work will be found a valuable aid to the surgeon as well as to the doctor in general practice.

By Joseph B. DeLee, A.M., M.D. Gynecology. By

Practical Medicine Series of Year Books. Obstetrics. J. P. Greenhill, B.S., M.D., F. A. C. S. 1932. Chicago Year Book Publishers, Inc.



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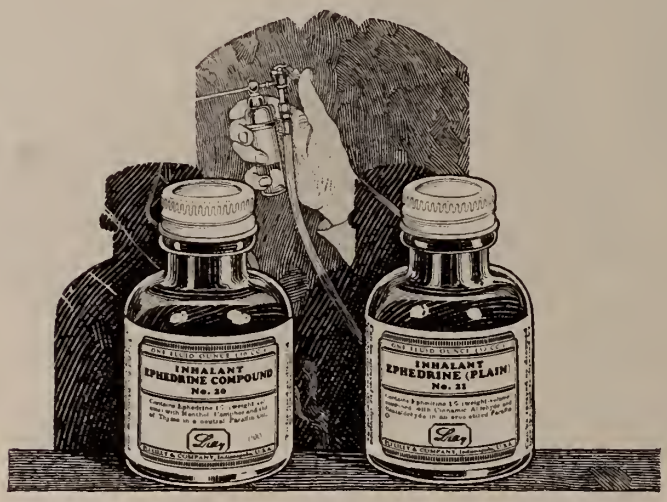
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Editorials

CONTRAST THE REPORT OF THE COMMISSION ON MEDICAL EDUCATION WITH THE REPORT OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE

Contrasted with the report of the Committee on the Costs of Medical Care is the report by the Commission on Medical Education organized in 1925 by the Association of American Medical Colleges. Contributions for the support of this commission came from the A.M.A., the Rockefeller Foundation, the Carnegie Corporation, the Josiah Macy, Jr., Foundation, and a number of medical schools. The import of this committee was to study principles and conditions involved in medical education and licensure in furtherance of the desire to correlate medical education with modern progress, and both the advances in university education and the needs of everyday society. However the committee could not do this task without running flatfootedly into some of those very tenets of medical ethics and economics with which the Committee on the Costs of Medical Care has made so insolently and so ignorantly free.

This committee on medical education had representatives from the Association of American Medical Colleges, from the American Medical Association and distinguished lay as well as medical educators and many other prominent medical men. Yet the findings of this committee were distinctly against that socialism that seemed so dear to the heart of Dr. Wilbur's committee. This anti-socialistic committee not only reviewed the medical curriculum, the supply and distribution of physicians, graduate education, licensure, premedical education, domestic and foreign medical education but also the nature of medical practice.

Now this commission does not recommend the taking of medicine and putting it into the hands of sociologists but it does recommend

the putting of a little sociology into the hands of physicians by the inclusion of economics and sociology in the undergraduate physician's curriculum. Not for an instant does this commission of men who know medicine, falter in its declaration that medical practice and all that appertains to it must remain in the hands of the physicians themselves. The biggest idea this commission drives home is that the more important part of the question is the quality of medical care and its efficient distribution rather than the question of the better distribution of the economic burden of illness.

In other words, the *doctors are more concerned in medicine than they are in economics. They are more concerned in making people well and keeping them so than in finding out who is going to pay for the work. Quality of medical care, not quality of financing nor of organization is the doctor's plea for the people!*

The commission insists with equal vehemence that the distribution of doctors is faulty in the United States and that doctors are increasing at too rapid an output and that we have too many doctors already, anyway! These two basic errors the commission says demand immediate rectification.

Other salient points made by this commission are:

"Some maintain that standardized medical service should be made available on a mass-production basis. The unit of practice, however, whatever the type or degree of organization, is the individual patient. It is a fundamental fallacy to base any program upon an assumption that the human being can be, or is likely in the future to be, a uniform standardized organism."

This statement comes from a group of men who have passed in their careers through many different phases of medical interests, so should it not be given far more weight than any attempt to change the nature of medical practice coming from a group representing largely men who have devoted their lives to other interests than the care of the sick?

The report of this commission is a challenge to the medical profession, the universities and the medical schools to develop proper leadership in securing a medical profession of the proper quality for the needs of today and of the future.

There is an urgent need, says the report, "for the coordination of the efforts of the various groups and individuals in the field to obviate the inadequacies of isolated and duplicating activities, to secure collective expressions of policy, and an active participation of all in the common undertaking."

"Emphasis must be kept constantly upon the fact that only through a sufficient number of properly trained physicians can a community expect to meet its responsibility for the care and prevention of illness and the protection of health. There is no substitute for this essential feature."

Nor can there be!

THE PASSING OF J. WARREN VAN DERSLICE



Dr. James Warren Van Derslice, past president of the Illinois State Medical Society (1919-20) was a man whose death causes a sharp hiatus in the routine and progress of medical practice and medical economics. During the war Dr. Van Derslice served as captain and later as major in the Medical Corps; he was a member of the House of Delegates of the American Medical Association from 1921 to 1930 and again during the session of 1932. In 1909 he was honorary president of the Sixth International Medical Congress in Budapest.

and in 1920 he was President of the American Association of Medical Milk Commissions. From 1912 to 1918 he was professor of pediatrics in the Illinois Post-Graduate Medical School and from 1893, the year of his graduation from Rush Medical College, until 1916 he was a member of the faculty of his alma mater in the department of pediatrics. His death occurred on Christmas Eve, and so seemed doubly sad. Dr. Van Derslice was only 63 years of age, just approaching the time of his greatest wisdom. He was ill almost five weeks. Death was due to acute diverticulitis, with resulting pylephlebitis and multiple liver abcesses, and a terminal acute purulent peritonitis.

Dr. Van Derslice was born June 26, 1869, at Cheney, Nebraska and came to Chicago in his youth. He specialized in pediatrics. He did post-graduate work in his specialty in London, Berlin and Vienna in 1904 and 1909 and read a paper and presided for a time at the international Medical Congress in the latter year. For several years he has been chairman of the Milk Commission of the Chicago Medical Society and he was president of the Aux Plaines branch in 1915. He was on the attending staffs of the West Suburban and Oak Park Hospitals and was secretary of staff of the former, charter member of the Oak Park Post of the American Legion, of Oak Park Lions and a member of other local organizations.

Dr. Van Derslice's most important scientific achievement was his yoeman work in improving the milk supply for babies. He had a grasp of this problem that made him one of the great men of the country in this task, which brought him in contact with dairymen on the one hand and scientific investigators on the other. His wide acquaintance with medical problems arising in the various legislative bodies he worked in made his advice invaluable.

For organized medicine he was known as one of the wheel horses, his genial personality, rugged outspokenness and absolutely disinterested honesty of purpose made him an outstanding leader.

Funeral services were held December 26 at the Pilgrim Congregational Church, Oak Park. The active pallbearers were Dr. Van Derslice's colleagues in the Aux Plaines branch of the Chicago Medical Society; his associates in the Chicago Medical and Illinois State Medical Societies and the A.M.A. were honorary pallbearers. Members of the Aux Plaines branch formed a guard of honor. The Lions Club and American Legion assisted.

SHOULD THE COMPULSORY PRACTICE OF EUTHANASIA BE THE NEXT LEGISLATIVE AFFLICTION UPON THE MEDICAL PROFESSION?

Advocates of euthanasia affirm that very faith that they deny, through their assumption that man will be better off in the hereafter than he is here, and that it is advantageous to exchange this world's known ills for whatever adventures and afflictions lie beyond the "thousand doors that lead to death."

So at the outset euthanasiasts proclaim themselves as paradoxists. For every prophet in every recorded age, whether pagan or Christian, who has ever foretold the after-life has held inflexibly to the tenet that, *Thou shalt not kill.*

Oriental mystics extend this teaching to the lowest forms of animal life. Even insect life is sacred. Now, while there is a steady invasion into western thought of far eastern thought and religion, even more paradoxically there is found on every side a distinct increase in the belief in euthanasia, whether for oneself or for others.

Some authorities blame this upon the imported influence of older and aging nations but shrewder American minds are quick to state that it is all merely another evidence of our acquired national intolerance to discomfort. The United States was founded and developed through a band of men and women who cheerfully embraced privation and hardship not from any masochistic love of distress and adversity but because of a passion for patience and the ability to choose a goal and to strive for it.

Suffering, trials, misery, wretchedness, poverty and abnegation were regarded by the early colonists as they have always been regarded in the spiritual perspective,—that is as a part of the process of life. The entire Christian religion is based upon the theory that only by the travail of pain, literally "the way of

the Cross,'' can the mortal cycle be accomplished and the immortal orbit achieved. The same teaching is found in the books of Genesis. Buddha knew it, and it shouts at mankind from the very bricks of Persepolis and the clay of the Chaldees. Oddly enough, man through the ages has advanced almost illimitably in the science and knowledge of mortal matters—he has conquered ''the earth and the air and the waters under the earth'' but he has not by a single iota approached any nearer the habitat of the soul. He does not know the substance of his essence, he cannot rule it, or destroy it so far as exact knowledge is concerned, nor protect himself from it. Mocking, elusive, taunting as the vagaries of the weather, the soul, the consciousness, the ens or whatever you wish to term it, remains not the conquered of man, but his conqueror.

And there lies the hitch for euthanasia.

There has not been nor is there a physician who ever practiced medicine and there never will be one who has not had, has not or will never have many a case of incurable illness, affliction, deformity, suffering or mutilation in the face of which the way of mercy would seem to lie only through the doors of death.

The trouble is no physician can tell what lies upon the other side. Is ''death the little door that leads to light''? If the body ceases to suffer and to ail, what happens to the soul?

Homer, Virgil, Dante—all the great classicists who have written of life and death—incorporate into their works an intense pity for those who have ''ceased to dwell upon this earth until their appointed tasks were done.''

Yet even in the face of this ignorance of the destination to which the victims or the beneficiaries—as you will—of a coup de grace, are sent, daily recruits to the cause of euthanasia gain amazingly. The trouble is that the ranks of the euthanasiasts are drawn not only from professional men, but from the laity. The thin fine line between euthanasia and murder is already as debatable as the question of abortion, and neither more nor less so. The fly in the ointment is the uncertainty of what comes next.

Eyes of the nation are turning now to the state of Illinois where a mother killed her three children and tried to kill herself because she was too poor to feed and clothe the group.

The unfortunate woman who deserves all the leniency in the world, at this writing is going to trial in the criminal court.

In this case as in most gospels of euthanasia it would seem that desire to relieve the feelings of the living and ease the burdens and the worries and the impossible load that care of the object of the euthanasia demands, had as much to do with the ultimate act as the woes of the victims. In this case the mother had no employment, the children were of the age deemed ''troublesome'' by any caretaker and discouragement and distress had cankered the poor woman's judicial perspective. Of a similar alignment is the decision of the physician who would give a slight overdose of a lethal medicine to still the heart whose every beat means unbearable suffering to some pitiably stricken human being. A suffering, too, the intensity of which is shared by every member of the family, or if the patient is a public charge, is another addendum to the overburdened taxpayers of a world now gripped by poverty.

Almost a half century ago that morbid yet keenly astute sociologist of Scandanavia, Henrik Ibsen, discussed the problem of euthanasia in his able drama ''Ghosts.'' In that you will remember the heroine, Mrs. Alving, administers a fatal medicine to her syphilitic, semi-imbecile, thoroughly debauched and wanton son who is following the footsteps of his rake of a father and who has already seduced his illegitimate half sister who is in service in the household. In this play the old family physician who has attended the birth of the son, and the birth of the half-sister, to that maid, her mother who had been in service before her, and who had watched Mr. Alving sicken and die from the diseases of his excesses, makes a plea for euthanasia that is all the more virile because of its terseness.

All of Ibsen's plays made society hold its breath. This one in particular caught at the heart and the throat and the fingers of both laity and profession. It was well named ''Ghosts.''

This Ibseniana was one of the earliest manifestations of the lay public's approval of euthanasia. Right now fresh impetus is being given to the movement. It is all quite in line with the development of those materialistic concepts of life that hold the state supreme,

and the omnipotent arbiter of human rights and duties.

Through this development stark socialism gets a chance at yet another masquerade, and this time, only too often in the mask of eugenics. All of a piece are such legislative pyrotechnics as the suggested euthanasia legislation; and that which makes legal license of love, ease of divorce, encouragement of family limitation, recognition of therapeutic abortion, sterilization of delinquents and dozens of other antisocial and unnatural practices.

The latest to be touted by those who would make the world over by laws alone, is the euthanasia idea.

"On a subject about which there should seemingly be no discussion among a civilized people," says Rev. W. I. Lonergan, S. J., "every day we are hearing more and more talk and the quiet killing of incurable sufferers or of the insane is constantly gaining new defenders. The fact will surprise many but nobody can afford to ignore it.

"The practice of endeavoring to relieve the hopelessly ill by hastening their death is nothing new. What is novel is its growing endorsement by medical men whose great task has always been recognized to be the prevention or cure of disease; by lawyers whose professional attitude has hitherto been to penalize and discountenance suicide and murder; and by non-Catholic clergymen, though Jews and Christians alike have heretofore always assumed that the prohibition on Mount Sinai not to kill extended to self-inflicted death as well as to murdering others."

As "Better Health" remarks ably: "Not only are murder and suicide everyday occurrences throughout the country, but what has been traditionally stigmatized as sinful and criminal is being more frequently condoned and defended. So far as the United States is concerned, euthanasia is, like most of our modern immoralities, a European importation that has come to us without any tariff opposition. Infidel, Communistic and radical statesmen in Germany, Czecho-slovakia, and other countries have for some time been advocating euthanasia legislation, though with only partial sucess."

Less than a year ago a committee of the Illinois Homeopathic Medical Association drafted a resolution urging the legalization of the administration of drugs to put imbeciles and sufferers from incurable diseases painlessly to death. The February *American Journal of Public Health,* 1932, editorializing on euthanasia, sympathetically and with seeming approbation refers to an article that appeared in *Public Health,* November, 1931, which professedly advocated legislation for voluntarily euthanasia and was, *mirabile dictu,* the presidential address of Dr. C. Killick Millard, Medical Officer of Health, Leicester, England, at his installation the previous month.

Court records and press notices in France, England, Denmark, Russia, the United States, and elsewhere, show that men and women who have slain relatives, or physicians who have deliberately hastened the deaths of patients to end their sufferings, have not only been acquitted of murder but even applauded for their conduct.

In a relatively short period seven such killers failed of conviction in France. In Russia, in 1928, a father who had put to death his imbecile child got off with a mere reprimand. In England a man who drowned his sick daughter, a four-year-old tubercular, was freed by a jury, three of them women, on the score that he was actuated by love and sympathy. Only last winter, in Copenhagen, where a woman deliberately overdosed her mother, the judge in the case was reported to have viewed it leniently because it was prompted not by malice but by affection.

It will be recalled that in our own country a practical example of euthanasia was given a few years ago in Chicago and met with a great deal of medical and popular approbation when a physician with the consent of the parents of a child born defective refused to perform an operation that would save the infant's life but leave it an incurable sufferer. In 1925 a Colorado physician, in harmony with euthanasia principles, put his thirty-year-old daughter, a hopeless invalid, to death and at his trial eleven jurors voted his acquittal, the twelfth later saying that he was on the verge of changing his vote when the jury was dismissed. In January of this year a man in Ohio confessed that a year before he had chloroformed his infant son ill with an incurable brain infection and he, too, met with widespread sympathy. A Minnesota banker won the same popular ap-

proval when he shot his deaf-mute daughter, a girl of seventeen, and then turned the weapon on himself."

Dr. Millard's professional position makes interesting his attitude on euthanasia. He details his proposed measures to legalize euthanasia and is even willing to let the victim consult a spiritual advisor, get a blessing and receive a painless death with all the ease with which he might order a fresh suit of clothes. Dr. Millard however, even he, is unable to state whether the victim will be getting from the frying pan into the fire. However Dr. Millard is not original. He gives at the best merely a repetition of Lecky and Westmarck. Nor does Dr. Millard expect to rid the world of imbeciles or mental defectives at a wholesale rate. He is merely willing to permit a voluntary choice for the sufferer from an incurable disease as to a "quick and easy death" or a lingering last illness. As to the myriad of technicalities as to when and why, as to the legalities of it all, as to the perversions of such a law in the hands of quacks and charlatans, Dr. Millard sends no "safety legislation" to rid his proposal of the millions of vexing problems, adjudications and quibbling that must of necessity arise.

In 1929 the question of legalized euthanasia was up before the German Reichstag. The excuse then for administration of the death potion was that it would be the "pinnacle of humaneness," but the majority of the medical profession is of the mind that such a law would be a free-for-all-alibi for all sorts of quackery.

When the question was discussed before the Reichstag, Dr. Hermann Zondek thus protested:

"In my opinion the suggestion does not deserve serious consideration. No matter how extreme the condition may be, no physician should be allowed to give a dying patient a coup de grace, for what physician can claim he is free from a false diagnosis? His function is to heal and to help. But the chief point of my objection to legalizing euthanasia is that the entire medical profession would find itself in an utterly impossible situation if it were legally authorized and permitted to put an end to the life of a dying patient. It would, furthermore, instantly wreck the confidence of the patient in his physician."

As to the English "mercy" killings, Dr. A. A. Brill, the American psychiatrist, remarked: "Cases such as these are establishing dangerous moral and legal precedents for society . . . We should keep this most important law of all, the law of life, clear-cut and free from pernicious sentiment."

Some members of the legal profession are in harmony with the euthanasia movement, but generally lawyers reprobate it. They fear it as a situation likely to result in aiding and abetting murder. One famous American criminal lawyer has noted that the acquittal of those who inflict painless death on incurable sufferers is a perilous precedent that may easily be taken advantage of and an evidence of the increasing danger of "sympathy overbalancing factual judgment" in murder cases.

Dean Inge, distinctly sympathetic toward euthanasia, has gone on record as expressing the hope that should he ever suffer from an incurable disease he would have patience to await the end. In his ethics volume, "The Problem of Right Conduct," published in 1931, Canon Peter Green, an Anglican divine, thus writes:

"Many men every year do commit suicide to escape lingering agony. In such a case I should myself like my physician, in conjunction with a specialist, to be allowed to state that the disease was fatal and likely to be slow and painful; and then I might be permitted to make a sworn declaration that I desired to end my life at once in some painless manner. This would enable a man to settle his affairs; to say goodbye to his friends: and to receive the last rites of the church."

ROCK ISLAND COUNTY MEDICAL SOCIETY MAKES SUGGESTIONS TO ITS STATE SENATOR

The chairman of the committee of the Illinois Commission on Taxation and Expenditures sent the following letter to the president of the Rock Island County Medical Society:

STATE OF ILLINOIS
THE ILLINOIS COMMISSION OF TAXATION AND EXPENDITURES

Moline, Illinois, July 9, 1932.

Dr. Perry H. Wessell, President, Rock Island County Medical Ass'n.,

Dear Doctor Wessell:

As this letterhead indicates, I am chairman

of the State Commission created by law passed by the last General Assembly 1931 which is for the purpose of studying taxation and expenditure thereof.

The aim of this commission after its deliberations, is to make recommendations to the next General Assembly which convenes in January, 1933. We hope to make suggestions which, if enacted into law will reduce the cost of state and local government.

As one interested in this subject, I am asking you if you will submit to me some concrete and practical suggestions on taxation and expenditures, having in mind a reduction of both, that this Commission may study. At the present time, the Commission is studying the question of merging some of the tax levying and tax spending political units of the state and county. We will go into the study of state expenditures from Springfield in a short time.

Any suggestions from you or your organization will be appreciated by the undersigned as well as by the State Commission.

Yours very truly,
(sig)
MARTIN R. CARLSON, Chairman.

In response to Senator Carlson's letter the president of the Rock Island County Medical Society appointed a committee to study the situation and offer suggestions as to how best to remedy the tax burden and reduce government expenditures. The following is the medical society committee report:

ROCK ISLAND COUNTY
MEDICAL SOCIETY COMMITTEE REPORT

Your committee to study methods of reduction in tax levies and expenditures reports with diffidence.

Purely local conditions and suggestions are felt to be of tiny import except when viewed in proper relationship with state and national settings. Your committee, therefore, asks leave to preface its few concrete suggestions with a general statement.

The year 1889 marked a change in governmental practice when, for the first time, a special class of citizens was granted representation in the Federal Executive department. The creation of a Department of Agriculture was followed shortly by the creation of departments of Commerce and Labor, each representing an additional class of citizens equally foreign to any proper business of government theretofore recognized. The function of government is the exercise of those powers and the fulfillment of those duties which protect citizens in their property and family rights and in peaceful pursuits, and also to provide a business office for the transaction of international affairs. Tolerance of all which affects the individual alone, is the essence of good government. In each of these three non-governmental departments there has grown an inconceivably vast array of tax-eating bureaus, whose annual expenditures have become greater than any country ever was able to endure.

Many of these bureaus have bribed state legislatures to levy and spend tax money under bureau supervision, through the expedient of matching state funds with federal funds in equal amounts and for stated purposes. Most of these expenditures violate the Constitution of the United States by usurping powers reserved to the states—except that the state legislatures acting do voluntarily sell their birthright for a mess of pottage. Most of the activities pursued in this manner have little or nothing to do with recognized responsibilities of government.

Since 1921 the lobby strength of bureaus in the three extra-governmental departments has been sufficient to enable much dictation to Congressional committees by an army of tax-fed bureaucrats who hold no executive or legislative office and yet are fed at taxpayers' expense, to the detriment of all concerned.

An example of the tax irresponsibility of the Federal Congress under lobby pressure may be cited in the 1921 change which overtook the Tariff commission. Prior to that time the Congress had functioned under the Constitution as the one and only tax-raising power. In that year, Congress gave to a commission of five men, blanket authority to raise or lower any or all import duties within a margin of 50 per cent. of the figure fixed by Congress: the commission to be appointed by the President and held subject to removal by him. Under this plan the cost of sugar alone to the American consumer may be made to vary, up or down, by as much as $150,000,000 per year, not by the Congress, but by five executive appointees.

So fearful of lobby domination had the Congress become, that, when both houses voted to undo this giving away of their own birthright of revenue raising, in neither house could a two-thirds majority be found to override a presidential veto. Congressmen change with each election while tax-fed bureaus remain and grow to the limit of taxpayers' powers to provide. Within the past ten years bureaucratic growth and greed have progressed so mercilessly that that limit may well be in sight at the moment.

The plight of the states is pathetic in that all have succumbed to bribery and dictation and tax-levying under one or more of the 50-50 bureau aid plans, taxing their citizens to match money extorted from the same citizens to be carried to Washington to be counted and carried back to the states if any be left after the extraction of salaries along the route. In all of these proposals, eleven states pay 95 per cent. of the cost and the remaining states milk them perseveringly.

The medical profession may well take pride in having fought, to a standstill, its share of controversy with tax-eating bureaus. Had business men or dirt farmers done as well in their respective fields, the present unbearable tax situation would not exist. The Illinois Legislature is to be congratulated upon being one of the three which never did succumb to bribery by the Children's bureau of the Department of Labor, during a seven-year onslaught.

As a means of relieving our lawmaking bodies of an almost unbelievably heavy pressure by bureaucratic lobby, your committee offers for consideration two suggestions:

1. That the personnel of State and National Houses of Representatives be reduced by approximately one-half, while the tenure of office be made four years.

2. That members of the National Senate be relieved of the present Direct Primary Law and be selected by vote of state legislature, as formerly was the case.

The setting established, your committee has considered the matter of possible economies in county tax levies and expenditures. We suggest for consideration and diffidently recommend:

1. That numerous elections be combined to be held at one time and place.

2. That county offices be combined when and if feasible. (Coroner; health officer; judgeships.)

3. That salaries of all county officers be fixed by the county Board of Supervisors instead of by the State Legislature as is done in some instances.

4. That county officers and assistants be paid fixed salaries while collected fees be turned over to the general fund.

5. That paupers be fed wholesome food but in less luxurious manner and that responsibility for their care be again centered in the county Board of Supervisors.

6. That pensions be abolished or reduced.

7. That fees of investigators of poor claims be cut and the number of investigators reduced.

8. That county road-building projects for the immediate future be pursued under the gas-sales tax fund in just so far as employment may enable citizens to pay taxes or to pay for support furnished at county expense.

9. That the Rock Island County Board of Supervisors be commended for its careful avoidance of extravagance; and that civic effort of the Rock Island County Committee on Taxation be commended.

In the matter of tax levies: your committee suggests:

1. That a state sales tax be levied to *equalize* reductions in real estate and personal property levies.

2. That inter-city truck license fees be sharply increased and a mileage tax be placed upon such buses and trucks.

3. That no attempt be made at diverting gas-sales tax money from its stated purpose.

Your committee emphasizes a belief that small local economies are of less importance than is the development of tax-consciousness among voters as an antidote for the evil of gratuitous bureau government.

Respectfully submitted,

W. D. Chapman

A. E. Williams

A. T. Leipold

Committee.

THE CREATION OF PHYSICALLY HANDICAPPED CHILDREN'S CLINICS IS IN THE HANDS OF THE COUNTY MEDICAL SOCIETY

The Illinois State Medical Society through the Illinois Medical Journal, and through other channels, has persistently fought all efforts to force State Medicine on the Citizens of Illinois for many years. We have repeatedly emphasized the fact that medical activities in Illinois should be sponsored by medically trained individuals, and that all clinics conducted in Illinois, in order that they may be highly successful, must necessarily be organized and operated under direct County Medical Society supervision. Many clinics held in Illinois for a considerable number of years have been sponsored by Lay Organizations although the actual clinical work has been done by physicians, members of the State Medical Society. No one cares to deny the fact that much good work has been done in many of these clinics, but they would no doubt have been more successful under strictly medical supervision. It is quite obvious that a higher degree of cooperation, a most desirable factor for good, would have been attained if the local County Medical Society had been responsible for the clinics both as to arrangement and operation, and some physician would have assumed responsibility for the after-care suggested for each particular patient.

No one can deny the fact that many times the Medical Profession has been imposed on through many patients being referred to clinics for care, when they are able to pay at least a modest fee for services rendered.

With these basic facts in mind, and after a thorough consideration of the subject over a long period of time, the Council of the Illinois State Medical Society, at its meeting in September, adopted an outline which is suggested for the conduction of Physically Handicapped Children's Clinics by the County Medical Societies. There is nothing at all mandatory in the matter, on the part of the County Society, but if the Component Society desires to organize and conduct its own clinic of this type, and desires any assistance in such organization, the Scientific Service Committee, a sub-committee of the Educational Committee of the Illinois State Medical Society will give all possible aid asked for, in such organization.

The primal unit is always the County Medical Society, the real basic unit of our Medical Organization, and all decisions as to the formation and conduction of clinics, the time, place and method of operation, as well as the selection of clinicians, is a matter to be settled entirely by the local Society. Several County Societies in Illinois, are now organizing their own clinic, to be conducted entirely by their own members, while several others have requested that the Scientific Service Committee aid them in selecting an outside clinician for the actual work.

In adopting this outline schedule form as recommended by the Council, no additional expense is incurred by the Illinois State Medical Society, there are no field workers, organizers, traveling representatives, or other paid executives working at the expense of the Society, but the Society is merely using an office already created which is ever anxious to be in closer communication with all component County Societies, and assist them in every way possible.

It is recommended in the outline that all patients able to do so, should pay a reasonable fee for services rendered, to reduce to the minimum, unnecessary pauperization, although, of course, final decision in this, as well as all other questions relative to the operation of clinics, is a matter to be decided by the County Society itself.

Through the assistance of many organizations desiring to cooperate in this humanitarian work, it is believed that no difficulty should be experienced in the average Illinois community, to solicit funds to take care of the Clinic.

It has been shown repeatedly, that in many of our communities there are physically handicapped children who have not actually been seen by the family physician since delivery, or after postnatal care was discontinued, and many of these cases have been discovered and brought to the Clinics by Welfare Nurses, or other workers, which again shows the value of these cooperative individuals or organizations in the clinical program.

As stated before, all decisions relative to the creation of physically handicapped children's clinics, are in the hands of the County

Medical Societies, and if any additional information is desired relative to any phase of the subject, same will receive prompt attention, by addressing Miss Jean McArthur, Secretary, Educational Committee, Illinois State Medical Society, 185 North Wabash Avenue, Chicago.

WARREN COUNTY MEDICAL SOCIETY CRIPPLED CHILDREN'S CLINIC

The regular Physically Handicapped Children's Clinic conducted by the Warren County Medical Society was held at the Monmouth Hospital, on January 19, 1933. This clinic established by the Society six years ago, has been gradually increasing in popularity, and has shown conclusively, that County Medical Societies can successfully conduct their own clinics without question. The citizens of the community have not only been intensely interested with its progress, but have given many types of encouragement. The Society has had the cooperation of a group of women who formerly were interested in this type of welfare work, and who are now furnishing the necessary operating expense money,—a highly essential factor. The Press has always been generous in their reports and publicity for each clinic that has been held.

The Hospital authorities give a thorough cooperation, realizing both the community need, and the value of these clinics to the student nurses in training at the institution. Many graduate nurses have visited the clinics regularly, and have been willing to cooperate in every way possible, when called on for some type of assistance. A School nurse and Community Welfare nurse have attended each clinic, and they have played a highly important part in the clinical program. The nurses have visited the home of each patient regularly during the interval between clinics, to be sure that the suggestions for after care have been understood, and actually carried out. When passive motion, massage, or similar measures have been advised, these nurses have given them regularly. They visit the homes likewise, before each clinic to be sure that every patient will be present during the day, and if they have no way of getting to the clinic, arrangements are made for their transportation.

During the clinic, a stenographer is present to take notes from which the records are properly revised and brought up to date subsequently, and as an additional check-up, a dictaphone is also used so there will be no question as to the findings, and prescribed treatment for the case. When x-ray pictures are desired, they are made immediately, and reported to the clinician before the patient leaves the hospital. Most of these bills are paid immediately by the patient, but in the case of those who are unable to pay for this service, the obligation is assumed by the special ladies' committee which is always in attendance.

At the clinic on January 19, a total of forty-one patients were seen; twenty-seven of these had been seen previously and fourteen were new patients at the clinic for the first time. The family physician was present during the day, in nearly every instance, and he received definite information relative to his patient from the clinician.

During the six years this clinic has been in progress, it has been a matter of unusual interest to the physicians in attendance to see the wide range of orthopedic conditions presented for observation, and subsequently, to note the satisfactory progress of nearly every case. Some patients seen at early clinics, when they were carried in the arms of parents, are now seen walking satisfactorily. A number of endocrine disturbances diagnosed one or two years ago show a decided improvement under the prescribed treatment, as is noted particularly on x-ray examination.

An analysis of some of the more interesting cases seen at the clinic on January 19 show,—

1. Knee injuries, three cases, one with no evidence of pathology, and two with bone foreign bodies in knee.
2. Ununited fracture of tibia in girl of 11, operated on at clinic—the operation, a sliding bone graft.
3. Pes planus, two cases.
4. Coxa vara, two cases.
5. Endocrine imbalance, four cases, three showing disturbances in the epiphyses of the head of the femur, and one being a general systemic disturbance.
6. Pott's Disease, two cases, one aged 5, and the other 10.
7. Automobile accident to chest, boy aged 5.

8. Talipes calcaneovalgus, two cases.
9. Talipes equinovarus, two cases.
10. Infantile paralysis eight cases.
a. Both lower limbs.
b. One lower extremity, two cases.
c. One leg and opposite arm.
d. One arm.
e. One leg.
f. Erector spinae muscles, two cases. In one of these, quadratus muscle on one side practically disappeared.
11. Traumatic torticollis, patient 9 years of age.
12. Congential spastic paraplegia, involving entire body.
13. Congenital deformity of the occipital bone.
14. Syphilitic deformities.
15. Scoliosis, two cases.
16. Spastic paralysis, affecting one foot.
17. Congenital absence of four fingers.

This shows the unusual interest in the clinic, and the many types of cases coming before it.

After conducting this clinic for a period of six years, it is quite evident to the members of the Warren County Medical Society, that there are many people in the county who attempt in every way to disguise the fact that one of their children have some structural defect, and it has been largely through the establishment of confidence in the clinic, that many have realized that these unfortunate conditions are not in any way disgraceful, but there is an opportunity in most cases, to give the crippled children an opportunity to enjoy life to a greater degree and, later on, become self supporting.

The clinic established primarily as an experiment has proven itself to be an actual necessity in the community, and we believe that the experience in our own county is no different from that to be found in every other county in Illinois.

It is also the sincere opinion of all physicians who have visited this clinic from time to time, that clinics should be conducted by local Medical Societies, to get greatest benefit for those who need the service, and again that it does not in any way tend to pauperize individuals who are not subjects of charity ordinarily.

Harold M. Camp, M.D.
Monmouth, Illinois.

CIGARETTES HELD TO BE FACTORS IN CANCER, HEART DISEASE AND TUBERCULOSIS

Tuberculosis, heart disease and cancer are fostered at least and possibly actually implanted in the effects of the use of tobacco by both sexes, according to numerous recent research authorities. Especially is this found to be true in regard to women among whom the cigarette habit has grown until it is an actual menace to the nation. Introduced in England after the Egyptian Campaign of 1882, in a few years the fad had been adopted extensively in America though greatly opposed. Anti-cigarette legislation became effective in twelve states but gradually was repealed,—the last repeal that of Kansas in 1927.

Ill effects of tobacco upon the nervous and digestive systems has long been an accepted fact. Especially are women susceptible to nervousness and insomnia and any habit that tends to weaken the nervous system is obviously inimical both health and to that beauty and "style" which in the eyes of the average woman stands paramount to health.

Cancer, tuberculosis and heart disease are all dreaded invaders. Of the three cancer is the most terrible, and while the origin of cancer has never been satisfactorily explained with any scientific exactitude, several recent surveys tend to show that the results of tobacco are often contributory if not actually conducive to this frightful malady.

Cancer of the lungs and cancer of the esophagus are on the increase, evidently emanating in many cases from lesions caused initially by the caustic poisons engendered during the combustion of smoked tobacco.

In a recent critical analysis of cigarette advertising, of cigarettes themselves and of the general effect of cigarette smoking, Dr. Emil Bogen of Cincinnati, O., stresses the evil of those aldehydes similiar to the poisonous compounds in bootleg liquor that must be reckoned with in addition to the tobacco's native nicotine. Cigarette paper is baneful enough but nicotine is worse, and pyredine and furfurol are additional evils. Dr. Bogen discovered that by holding a lighted cigarette in the hand he produced more toxic materials in the air of the room in which he was standing than result from active smoking when smoke is drawn

through tobacco and into the mouth.

Refuting an article on "Tobacco Smoking, a Clinical Study" by Wingate M. Johnson that appeared in the Journal A.M.A. a year or so ago, Dr. S. Adolphus Knopf states

"As a definite clinical observation I desire to state that in the tuberculous patient as well as in the predisposed individuals who follow the advice to stop smoking (not all of them obey it) a diminution of the cough and an improvement in the general condition has almost always been reported.

"That the irregular appetite, absence of taste and the nausea typical of tobacco dyspepsia may be one of the predisposing factors in tuberculosis Dr. Johnson surely would not wish to deny nor that the voluntary undernutrition in the cigarette smoking adolescent girl or young woman is made relatively easy by the anorexia accompanying the tobacco anorexia."

"I only wish here to emphasize again the warning to mothers who smoke cigarettes or whose husband or other member of the family smoke, not to do so in the presence of babies or young children.

"Smoke off the burning end is of more consequence to nonsmokers who breathe it than to smokers who indulge moderately. Smoke from the cigarette's end contains most of the material of the cigarette, and analyses show that this contains a considerable amount of ammonia. This in itself is a good reason why no smoking should be done in the presence of children and invalids."

"In a study of five thousand people who used tobacco to the extent of four cigars or nine cigarettes or nine pipefuls daily or more, Dr. Eugene Lyman Fisk, medical director of the New York Life Extension Institute, found six per cent. of thickened arteries, fifteen per cent. of rapid pulse, fifteen per cent. of decayed teeth, thirteen per cent. gum recession and twenty-seven per cent. of marked pyorrhea. Tobacco is evidently neither a tonic nor an antiseptic for the mucous membrane of the mouth."

(Quoting Henri Vaquez in Schrumpf-Pierron's *Tobacco and Physical Efficiency)* "The consensus of opinion in America among clinicians seems to be that tobacco may produce attacks of pain which simulate true angina pectoris but which cease when the use of tobacco is stopped. Among patients who are suffering from lesions producing true angina there is no question that tobacco increases both the frequency and intensity of the attacks.

"Since the war, the number of cases of hypertension in persons still young has greatly increased. Many of these persons are inveterate cigarette smokers. Trench life enormously encouraged the cigarette habit, and the number of smokers of more than fifty a day has certainly grown enormously.

"It has been found by investigators that in athletics those who smoke are inferior to those who do not smoke, and it is well known that the coaches who train college athletes almost invariably forbid smoking to the members of competing teams.

"In view of numerous other experiments and investigations Dr. M. V. O'Shea comes to the conclusion with which I venture to agree that 'taking a large number of individuals, tobacco will slow down and disturb the intellectual process of the majority of them.'

"Regarding the effect of tobacco on the nervous and digestive systems the fact is well known that its excessive use, particularly in the form of cigarette smoking, often causes serious digestive troubles, headaches, extreme nervousness, neuralgia, vertigo, insomnia and mental depression."

Dr. Hugh S. Cumming says "The cigarette habit indulged in to excess by women tends to cause nervousness and insomnia. If American women generally contract the habit, as reports now indicate they are doing, the entire nation will suffer. The physical tone of the whole nation will be lowered. The number of American women who are smoking cigarettes today is amazing. The habit harms a woman more than it does a man. The woman's nervous system is more highly organized than the man's. The reaction is, therefore, more intense. It may ruin her complexion, causing it to become gradually ashen. Propaganda urging that tobacco be used as a substitute for food is not in the interest of public health, and if practiced widely by young persons will be positively harmful."

It would be interesting to discover exactly

what percentage of our women, especially of girls even below the age of puberty, are already victims of the cigarette habit. Accurate figures would surprise many a parent and set to self-censure hundreds of mothers with whom cigarette smoking is a confirmed habit.

Again in a recent talk to the medical staff at the Ravenswood Hospital Dr. Wm. D. McNally, Associate Professor of Medicine at Rush Medical College, presented other data on the effects of tobacco smoke. Since the introduction of tobacco in England, by Lane in 1586, and its popularization by Raleigh, despite the decrees of churches, fanatics and laws enacted against the smoking of tobacco, the consumption has increased enormously, especially since the world war.

One table offered by Dr. McNally reads:

Year	Number of Cigars	Number of Cigarettes
1905	7,551,510,893	3,673,727,411
1915	7,564,323,265	17,980,164,482
1925	6,910,282,278	82,264,529,154
1926	6,910,956,028	92,110,213,691
1927	6,958,424,350	99,820,463,979
1928	6,788,717,161	108,715,908,654
1929	6,938,413,377	122,402,333,326
1930	6,276,960,398	123,809,553,142
1931	5,656,062,875	114,251,752,920

"In considering the effects of smoking one must think of the chemical action, the mechanical and thermal phases resulting from smoking. All of these are in turn changed for the worse by the disease conditions already present in the mouth and the body," said he.

"The effects of smoking are due in a large measure to absorption in the body of the alkaloid nicotine; as this is an alkaline substance its continual contact with the delicate cells of the lungs causes irritation during the inhalation of smoke. Nicotine, next to caffeine, is the most popular and widely used alkaloid. The everyday uses of both alkaloids are mere habits, not addictions as with the opiates, and the use of either can be discontinued without serious consequences. The nicotine content of tobacco varies; that of pipe tobacco runs from 1.25% to 2.8%; cigars from 0.91% to 1.9%; of cigarettes 0.43% to 3.34%. Both the smoke that is exhaled and the smoke arising from the burning end contain nicotine, as has been demonstrated by Lehmann, in the air of a room in which tobacco was being consumed.

"Webb recognized a cigarette bronchitis in the examination of 3,000 men in the army. Phillippson points to various organic carcinomata which might be produced by nicotine. He places the chemical factor so far above the purely mechanical factor that he prefers to speak of 'nicotine cancer' rather than pipe smoker's cancer.

"With slow intermittent combustion the cigarette yields a small amount of carbon monoxide in the main stream of smoke. In eleven minutes' time the carbon monoxide amounted to 0.26% of the weight of the tobacco and paper burned. With more rapid combustion (five minutes) this amount is increased to 1.30%. Tobacco smoke contains 80 c.c. of carbon monoxide to the gram of tobacco smoked. The mechanical factor in the smoking of cigarettes is not so important as the majority of men and women do not use cigarette holders but smoke the cigarette as it is removed from the package.

"However with cigars or pipes the roughened holder or stem of a pipe would play an important part in the irritation of the lip. The thermal factor above mentioned is much more important in the smoking of cigarettes as the smoke of a cigarette may get as warm as 190°C if smoked rapidly down to the end in a holder. The temperature of the smoke for the first 3.5 ctm. smoked remains around 27.2°C then gradually rises to 52°C if smoked to ½ ctm. of the end.

"The volatile matter varied from 7.9% to 21.12% the average of 33 popular brands being 14.96%. The tarry residue varied 4.84% to 15.29%, the average being 10.41%. The average weight of a cigarette of the 33 brands used in this investigation was 1.0911 grams. According to Hoffman cancer of the esophagus has increased from 1.0 per 100,000 in 1915 to 1.7 in 1922, falling to 1.4 in 1924, rising to 1.8 in 1926 but declining to 1.7 in 1927. Referring to cancer of the lungs, he gives the death rate as 0.7 per 100,000 in 1915, 1.1 in 1920, 1.6 in 1924 with the maximum figure of 1.9 in 1927."

Conclusions, drawn by Dr. McNally included these deductions.

"1. The tar of cigarette smoke contains nicotine, phenolic bodies, pyridine bases and ammonia, irritants which could account for the 'cigarette cough,' the chronic bronchitis of the cigarette smoker, the leukoplakia in

heavy smokers, and the increase of cancer of the lung.

"2. The temperature is not an important factor unless the cigarette is burned down to the last centimeter, when the hot smoke becomes more irritating.

"3. With a tarry residue of 4.94% to 15.29% a definite risk attaches to the smoking of a cigarette, especially since 6.56% to 11.58% may be absorbed or retained in the body.

"4. Cigarettes should not be smoked too short, as the last two centimeters retain most of the tar and other products of incomplete combustion."

According to Schlumm, the symptoms of chronic nicotine poisoning that have received the most attention are tremor of the hands, increased reflex irritability and inclination to tachycardia. Some authorities think that these are of psychic nervous origin, whereas others have noted a slight enlargement of the thyroid and consequently consider the possibility of an influence of nicotine on this organ. In persons who consumed large amounts of tobacco the author nearly always noted damp skin, a tendency to sweating and to diarrhea, and occasionally also glossy eyes, decrease in weight and loss of hair. All these signs are symptomatic of increased action of the thyroid. The blood picture of excessive smokers resembles that of patients with exophthalmic goiter. These observations induced the author also to study the basal metabolism and he found that, of seventy-one persons who consumed excessive amounts of tobacco, fifty-five (more than 77 per cent) had increased metabolism. In those of the smokers who could be induced to abstain from tobacco, the basal metabolism decreased and the nervous symptoms likewise improved. Further, the author studied the specific dynamic action of protein and also the iodine content of the blood. He found the latter to be considerably above the normal. So he reaches the conclusion that the excessive use of tobacco, particularly of cigarettes, has undoubtedly a considerable influence on the thyroid, and he thinks it probable that other incretory organs are likewise influenced. Although so far studies have been made almost exclusively on the suprarenals, some authors have suggested a connection between misuse of tobacco and certain disorders in the sexual apparatus.

Dr. Marion Craig Potter, of Rochester, N. Y., who is decidedly opposed to women smoking, in a recent address expressed regret that young people are burning up their systems with alcohol and nicotine, and pointed out that the thyroid gland, "which more than any other affects vitality, is especially affected by nicotine." To the argument that "our grandmothers smoked," she replies, "Let our grandmothers (!) smoke; they are not potential mothers."

Doctor Potter, who is interested in the "Five and a Fourth Year Plan," approved by the health organizations of the city of Rochester, is continually urging periodic health examinations as a prime means of maintaining good health and discovering incipient disease, and of a tabu on cigarettes.

THE 1933 ANNUAL MEETING

Arrangements are now well under way for the 1933 Annual Meeting of the Illinois State Medical Society, to be held in Peoria on May 16, 17, 18, 1933. The meeting will be held in the new Pere Marquette Hotel, which is one of the best meeting places the Society has ever had available for the purpose. It is planned to have every meeting, both General and Sectional, as well as the scientific and commercial exhibits under one roof. In arranging the meeting, a number of interesting changes have been made, which everyone believes will be for the better.

The General Opening Meeting usually held on Tuesday Evening, has been changed to a very short session to be held at 1:00 P.M., Tuesday, May 16, and this will be followed by the Oration in Medicine, then the regular section meetings will continue the afternoon's program. The Secretaries' Conference will be held at 10:00 A.M. Tuesday. The Veteran's Dinner will be held at 6:15 P.M. Tuesday, and the Annual Dinner of the component Society Secretaries' and the Eye, Ear, Nose and Throat Annual Banquet will be held at the same hour.

Following these dinners, the Peoria Medical Society will be host to the men at a Stag entertainment and reception, with an informal

program of entertainment, which will be different from the usual plan.

All Sections will meet on Wednesday morning until 11:00, when the Oration in Surgery will be given.

The President's address will be delivered at 1:30 P.M. Wednesday, this to be followed by Section meetings for the remainder of the afternoon. Wednesday Evening, the annual President's Dinner will be given, to be followed by the President's Ball, or cards as desired. This makes Wednesday evening entirely for honoring our President.

The regular Sectional programs will continue Thursday morning, until completed.

The two meetings of the House of Delegates will be held on Tuesday afternoon, at 3:00 P.M., and on Thursday morning, at 8:30 A.M.

Joint meetings of the Sections on Medicine and Surgery will be held while the House of Delegates has the two meetings, which will insure a better attendance and more interesting program.

All Section officers are anxious to complete their programs at an early date, and it is desired that all members desiring to present a paper or interesting case reports, should get in touch with the proper officers as early as possible, and submit title, and abstract of paper they desire to present. The list of these section officers is as follows,—

SECTION ON MEDICINE

Walter H. Nadler, M.D., Chairman, 8 S. Michigan Ave., Chicago.

R. F. Herndon, M.D., Secretary, Springfield.

SECTION ON SURGERY

Sumner M. Miller, M.D., Chairman, Peoria.

George W. Post, M.D., Secretary, 4010 W. Madison St., Chicago.

SECTION ON EYE, EAR, NOSE AND THROAT

Frank J. Novak, Jr., M.D., Chairman, 30 N. Michigan Ave., Chicago.

George S. Duntley, M.D., Secretary, Macomb.

SECTION ON PUBLIC HEALTH AND HYGIENE

John W. H. Pollard, M.D., Chairman, 1806 Maple Ave., Evanston.

J. Howard Beard, M.D., Secretary, Urbana.

SECTION ON RADIOLOGY

P. B. Goodwin, M.D., Chairman, Peoria.

Robert A. Arens, M.D., Secretary, 2839 Ellis Avenue, Chicago.

SECRETARIES' CONFERENCE

T. D. Doan, M.D., President, Palmyra.

H. A. Felts, M.D., Vice-President, Marion.

Elizabeth R. Miner, M.D., Secretary, Macomb.

The Peoria Medical Society, the host Society for 1933, is working hard to arrange everything locally, so that everyone attending the meeting will be well cared for.

The golf committees, for men and women, are anxious to know the names of those desiring to play golf on Tuesday morning, and as soon as these are received, full details concerning golf, will be announced. The Ladies' Entertainment Committee will arrange a schedule of entertainment for the visiting ladies, as well as the members of the Woman's Auxiliary, which too, will be announced before the meeting.

Further announcements of interest, in connection with the 1933 Annual Meeting, will be made in THE JOURNAL each month until the meeting is under way.

Any information relative to the arrangements, exhibits, either commercial or scientific, or anything pertaining to the meeting, may be had by writing the Secretary, and same will be submitted at once.

HAROLD M. CAMP, M.D., *Secretary,*
Monmouth, Illinois.

COMMITTEE ON ARRANGEMENTS FOR 1933 ANNUAL MEETING

Committee on Arrangements: C. G. Farnum, General Chairman; H. A. Vonachen, Vice-General Chairman; C. W. Magaret, Secretary-Treasurer.

Officers of the Peoria City Medical Society: J. R. Vonachen, Past President; Hugh E. Cooper, President; A. P. Kannapel, First-Vice President; Geo. Parker, Second-Vice President; C. W. Magaret, Secretary-Treasurer.

Reception Committee: Allan Foster, Chairman; Vice-Chairmen: C. U. Collins, Arthur Sprenger, Geo. Parker, Wm. Cooley, Orville Barbour, C. S. Turner and S. H. Easton. Members: Geo. Zellar, O. B. Will, C. H. Brobst, H. G. Eichhorn, J. C. Roberts, O. J.

Roskoten, J. P. McMahan, W. T. Marrs, H. M. Sedgwick, E. E. Royce and L. E. Monroe.

Entertainment Committee: W. A. Hinckle, Chairman; Baxter Brown, Vice-Chairman; E. Z. Levitin, A. L. Corcoran, F. G. Hopkins, Bernard Heymann and G. C. Lewis.

Registration and Information: W. B. Eicher, Chairman; Vice-Chairmen: J. F. Sloan and Walter Wyatt. Members: C. G. Blake, H. L. Williams, L. V. Boynton, F. L. Stiers, F. Haas, P. F. James and R. L. Eddington.

Committee on President's Dinner: B. S. Adelsberger, Chairman; H. M. Wilson, Vice-Chairman; J. E. McCorvie, R. L. Green, G. W. Washburn, F. S. Davis and T. S. Egan.

Publicity Committee: Leslie Rutherford, Chairman; R. A. Hanna, Vice-Chairman; Wm. Major, E. E. Barbour and Geo. Michell.

Meeting Place Committees: Surgery: S. M. Miller, Chairman; J. E. Bellas, Vice-Chairman; F. G. Morrill, Wm. Roche and J. H. Bacon.

Medicine: Harry Durkin, Chairman; J. W. Sours, Vice-Chairman; W. W. Cutter, A. A. Knapp, Clarence Fischer, T. C. Coggshall and A. J. Foerter.

Eye, Ear, Nose and Thoat Section: Wright C. Williams, Chairman; C. D. Brobst, Vice-Chairman; C. D. Sneller, C. D. Thomas and E. H. Bradley.

Public Health and Hygiene: E. S. Gillespie, Chairman; Wilbur Weinkauff, Vice-Chairman; R. C. Bradley, E. L. Davis and A. B. Barker.

Radiology: P. B. Goodwin, Chairman; H. B. Magee, Vice-Chairman; P. T. Spurck.

Industrial Surgery: S. H. Easton, Chairman; J. E. Meloy, Vice-Chairman; E. C. Burhans, L. C. Ives, G. L. Cohen and H. L. Yoder.

Transportation Committee: C. V. Ward, Chairman; C. P. Strause, Vice-Chairman; J. R. Bierly, W. H. Holbrock, G. R. Seward, B. H. Trewyn, W. L. Bowen and A. J. Blickenstaff.

Exhibits Committee—Commercial: H. L. Pintler, Chairman; M. T. Easton, Vice-Chairman; Sandor Horwitz, C. E. Scullin, S. A. Smith and D. D. Kirby.

Scientific: M. P. Bohrod, Chairman; F. H. Decker, Vice-Chairman; M. Pollok, F. M. Meixner, A. H. Cohen and J. M. McCuskey.

Ladies Entertainment Committee—From the Society: Margaret B. Meloy, Chairman; Ethel Cooper, Vice-Chairman; Esther H. Stone, Helen C. Coyle and Lucia H. Lucy.

From the Ladies: Mrs. J. R. Vonachen, Chairman; Mrs. W. C. Williams, Vice-Chairman; Mrs. H. E. Cooper, Vice-Chairman; Mrs. Arthur Sprenger, Mrs. W. A. Malcolm, Mrs. C. G. Farnum, Mrs. R. L. Green, Mrs. H. A. Vonachan, Mrs. C. D. Sneller, Mrs. R. A. Hanna, Mrs. C. E. Sibilsky, Mrs. C. U. Collins, Mrs. Allan Foster, Mrs. Geo. Michell, Mrs. J. E. McCorvie, Mrs. C. W. Magaret, Mrs. J. F. Duane, Mrs. F. G. Morrill, Mrs. H. A. Durkin, Mrs. C. S. Turner, Mrs. Clarence Fischer, Mrs. S. M. Miller, Mrs. W. L. Bowen, Miss Mary Knapp, Mrs. George Parker, Mrs. B. S. Adelsberger and Mrs. M. T. Easton.

Alumni and Fraternity Reunion Committee: R. M. Sutton, Chairman; J. A. Eastman, Vice-Chairman; L. A. Burhans, J. T. Weed, W. A. Borin and A. G. Ekonomou.

Golf Committee: J. T. Jenkins, Chairman; J. F. Duane, Vice-Chairman; L. M. Coffey and H. F. Diller.

Ladies Golf Committee: Mrs. W. W. Cutter, Chairman; Mrs. J. A. Bellas, Vice-Chairman and Mrs. H. M. Wilson.

Veterans Service Advisory Committee: E. A. Garrett, Chairman; E. E. Nystrom, Vice-Chairman; G. H. Stacy, A. E. Hubbard and T. W. Floyd.

Special Entertainment Committee: W. A. Michael, Chairman; E. P. Burt, Vice-Chairman; R. W. King, F. A. Causey, P. A. Cusack, A. D. Phillips, Elmer Seaburg, F. E. Hammitt, and C. E. Sibilsky.

Hotel Committee: W. A. Malcolm, Chairman; E. C. Kelly, Vice-Chairman; Wm. Blender, A. S. Plummer, F. H. Maurer, J. B. Jennings, W. A. Gott, K. N. Petri, P. R. McGrath, Geo. Borin, P. F. Jones, Thos. R. Plumer, Jos. Sparks and Jerry S. Bell.

WHY HE TALKED SO MUCH

A man got a set of store teeth. He went to a dentist and said, "What can be the matter? Ever since I got these teeth I can't keep from talking." The dentist looked at them and he asked him where he got them, and he said he got them from a mail order house. "No wonder—you got a woman's set of false teeth."

DOCTORS DESIRING TO PRESENT PAPERS BEFORE THE 1933 MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY TAKE NOTICE

SECTION ON PUBLIC HEALTH AND HYGIENE

All physicians desiring to prepare and read papers before the section on public health and hygiene of the Illinois State Medical Society to be held in Peoria in May should communicate with the chairman of the section John W. H. Pollard, Evanston, or the secretary, J. Howard Beard, Urbana.

SECTION ON RADIOLOGY

Doctors wishing to present papers before this section kindly communicate with the chairman, P. B. Goodwin, Peoria, or the secretary, Robert A. Arens, 2839 Ellis Ave., Chicago.

SECTION ON MEDICINE

Doctors wishing to present papers before the section on medicine communicate with the chairman, Walter H. Nadler, 8 So. Michigan Blvd., Chicago, or the secretary, R. F. Herndon, Springfield.

SECTION ON SURGERY

Doctors wishing to present papers before the surgical section will please apply to the chairman, Sumner Miller, Peoria, or the secretary, George W. Post, 4010 W. Madison St., Chicago.

SECTION ON EYE, EAR, NOSE & THROAT

Doctors wishing to present papers before the Eye, Ear, Nose & Throat section kindly communicate immediately with the chairman, Frank Novak, Jr., 30 No. Michigan Blvd., Chicago, or the secretary, G. S. Duntley, Macomb.

SECRETARY'S CONFERENCE

Any member wishing to present a paper at the secretary's conference communicate immediately with the President, T. D. Doan, Palmyra, or the secretary, Elizabeth R. Miner, Macomb.

EXHIBITS AT THE ANNUAL MEETING

The Illinois State Medical Society has never before had better facilities available for both commercial and scientific exhibits, than are available for the 1933 Annual Meeting. They will be shown on the lobby floor of the Pere Marquette Hotel, Peoria, but will be separated from the general lobby, so there will be no interference whatever.

All ethical prospective exhibitors who have not received the diagram and application for exhibit space, may receive same by addressing the Secretary of the Society.

We expect to have many interesting scientific exhibits at the meeting, and members of the Society who would like to prepare an interesting scientific exhibit, should also address the Secretary at an early date, telling the nature of the exhibit, and the amount of space desired for same.

Ethical hospitals desiring to prepare interesting exhibits, may also make such application, if they desire to have an exhibit at the meeting. Several interesting hospital exhibits appeared at the 1932 Annual Meeting, and these were very popular with the many visitors present. Complete information concerning exhibits may be procured promptly by writing Dr. Harold M. Camp, Secretary, Monmouth, Illinois, and all requests for space will be submitted to the special Council Advisory Committee, for action.

ALL CLINICS IN ORDER TO BE SUCCESSFUL MUST BE UNDER MEDICAL SUPERVISION

CRIPPLED CHILDREN'S CLINICS

The Illinois State Medical Society has on several occasions gone on record as disfavoring all clinics within our State which are not conducted directly under the supervision of the local component Society, realizing that all clinics, to be successful must be under medical supervision, both as to arrangement and operation.

Five years ago, the Scientific Service Committee at the request of the Warren County Medical Society, arranged to send Dr. Philip H. Kreuscher to Monmouth to conduct a Crippled Children's Clinic. The clinic was held at the Monmouth Hospital. Some 15 years ago a Warren County Crippled Children's Association was formed, and a sum of about $1,500.00 was readily procured. Soon after this time, Dr. East of Springfield began to conduct clinics in various parts of the State, and a portion of this fund was used to transport crippled children to the East Clinics, and to procure the necessary braces for the youngsters, as prescribed by Dr. East. Dr. East always had an

expert brace maker with him, on his clinical tour, who measured the children for braces, and they were purchased through him. Those in charge of the Warren County Crippled Children soon discovered that the real clinician was the brace maker, and also on a check up, discovered that the braces cost approximately twice as much as they would cost when made by others. Following this discovery, the nurse in charge of the children from Warren County, on each clinic, took the children to the brace maker, and not to Dr. East, who seemingly, was not an Orthopedic surgeon, although many children referred to the clinic were referred to a hospital in Springfield, where Dr. East was a salaried employee.

At the Monmouth Clinics, arrangements were made by the Warren County Medical Society with Dr. Kreuscher, and with the Hospital, which always welcomes the event, as an educational feature for the nurses in training. The ladies who have controlled the activities of the old Warren County Crippled Children's Association aid in getting the children to the clinic. Two welfare nurses, one employed by the county, and the other by the Welfare Association, attend the clinics and on the day following each clinic, call at every home of a cripple to be sure the family understands what the clinician desires, in the way of follow-up service, and also reports the same to the family physician. Some cases are operated on by Dr. Kreuscher at the clinic, and a small fee is paid for service by the Crippled Children's Association who still have some funds for the purpose.

Adequate records are kept of all cases. A stenographer is supplied to take in shorthand all of Dr. Kreuscher's remarks, and results of the examinations. These are carefully proofed by a physician and four copies are made. One copy of each record remains in the hospital, one copy is given to the nurses, one goes to the family physician, and one copy is kept by the Warren County Medical Society. Each family is visited regularly by the nurses, to note the progress, and urge them to see the physician regularly, to get the necessary follow-up service. Records of all cases are continuous, being added to, at each clinic, and a reliable record of the progress of each case from the beginning of the clinics is at hand.

The Illinois Elks Association is conducting crippled children's clinics throughout the state. Who gets the credit for the work accomplished? The Elks. Each lodge is assessed a per capita tax of fifty cents per member to help finance the work. Each lodge is urged to conduct charity balls, festivals, carnivals, or any other method to get funds, for the Elks do not propose to furnish money for all work, theirs being spent largely for administration purposes. The state is divided into districts, with one clinician in charge of the district. All arrangements for clinics must be made through the Elks Association. Copies of records of all cases must be sent in to headquarters, following the clinic. The clinicians, all members of the Illinois State Medical Society, do the actual work, and receive only necessary traveling expenses for their work. Following a number of meetings attended by officers of the Illinois Elks Association, and the Educational Committee of the Illinois State Medical Society, an agreement was made whereby all clinics conducted by the Elks Association should be held under absolute supervision of the component Medical Society, but this has not been done in many cases. They make the arrangements, the clinician does the work, and the Elks Association takes all credit for what is accomplished.

The Monmouth Elks Lodge has refused to pay their per capita tax because the Elks will not appoint Dr. Kreuscher as a special clinician. They cannot send in their own clinician, as he would receive no cooperation on the part of the local society members. During the past year, the local Elks fund accumulated, was used for paying the necessary expenses of Dr. Kreuscher, and other clinic expenses. A small fee has been paid for operations, the application of casts, etc. The chairman of the Crippled Children's Committee of the Lodge, is a physician who believes that all clinics must be under absolute Medical Supervision,—another member, a physician, is also a state officer of the Elks, and he has similar ideas. Together, they have sold their idea to the officers of Monmouth Lodge of Elks, and no attention is paid to the frequent appeals for the per capita tax.

PROPOSED PLAN

Any County Medical Society in Illinois can sponsor, arrange, and conduct their own Crippled Children's Clinics. Funds can be procured in the community by drives, such as are

being made by Elks lodges in the community. They can have the clinician of their choice, arrangements to be made by the Scientific Service Committee of the Illinois State Medical Society. The clinician can be paid moderate fees for surgical operations, and all expenses incurred. Proper publicity can be easily procured, through the assistance of the Educational Committee. Clinical records do not get into the hands of anyone not legally and morally entitled to the same. By an educational campaign in each community, sentiment favoring this type of clinic can be easily procured. Clinics should and must be conducted by Medically trained individuals, follow up service given by the same, and other organizations can cooperate by assisting in the raising of funds, getting patients to and from the clinic, and possibly in the giving of the necessary surgical treatment of the patients seen at the clinics. According to the Bulletin issued by the Illinois Elks Association, the sum of $17,000.00 was spent last year for the clinical program, and a check up will no doubt show that the major portion of the money was spent for administrative purposes, leaving the actual investment to the local communities, thus putting the financial burdens on them, without giving them a voice in the arrangements, or the selection of the clinician.

"SOCIALIZATION OF MEDICINE IS A STEP TOWARDS THE SOCIALIZATION OF INDUSTRY," SAYS MERLE THORPE, EDITOR OF "NATION'S BUSINESS"

When it comes to a matter of costs, percentages, profit and loss, business men are fond of saying that only business men are expert judges of leaks and losses. So a quotation from Merle Thorpe, editor of "Nation's Business" should have a lot of weight with the business end of "The Committee on the Costs of Medical Care" to say nothing of the laity that has come to think it knows more about medicine than the doctors themselves. Certain it is the profession can for once applaud a "business man's comment" on the economics of the medical profession.

Writes Mr. Thorpe:

DEEPER INTO SOCIALISM

It is a thankless task to criticize the labors of the Committee on the Cost of Medical Care, headed by Secretary-Doctor Wilbur, of the Department of the Interior.

The descent into paternalism, and from paternalism into socialism is easy—and doubly easy when the way is greased by sentiment, by the desire to better the health of the community, by sympathy for suffering, by the knowledge that costs of medical care fall with crushing effect on the overalled and white-collared poor.

The committee would have medical service provided largely by "organized groups," an extension of the already increasing method of practice through clinics.

How pay for this group service?

Here's part of the committee's recommendations:

1. Voluntary co-operative health insurance, in which organized groups of consumers unite in paying into a common fund agreed annual sums, in weekly or monthly installments. . . .

2. Required health insurance for low-income groups. . . .

3. Aid by local governments for health insurance. Part of the people, because of their low income, cannot pay, even on a periodic basis, the full cost of complete service in cases where the community relies for the provision of medical service primarily upon the purchase by its people of voluntary health insurance. Such communities may well use tax funds to the extent necessary to supplement the payments of those low-income families. When health insurance is required by law, it may also be necessary and desirable that a contribution be made from government funds.

The socialism of medicine is but a step toward the socialization of industry.

To tax A to pay B's doctor's bill is an appealing plan particularly when we put it on the ground of conserving public health.

But why not then tax A to pay B's food bill since it is nutrition that is essential to health?

It is comforting to know that the doctors themselves are in revolt at the Wilbur report.

A new treatment for enuresis, Sponge Cake T. I. D.

AUXILIARY NEWS

Dr. John R. Neal, President of the Illinois State Medical Society and Chairman of the Legislative Committee, informs us that the Bill for the Prevention of Blindness, about which Miss Audrey Haydn has talked to us on various occasions, is now before the State Legislature. Our State Auxiliary Program Committee has recently sent to each County Auxiliary printed material regarding this subject. Won't each one of you study this subject sufficiently to be able to discuss it intelligently and to answer questions regarding it?

It is further stated by Dr. Neal that "there is no appropriation connected with this bill in that the State has for many years supplied nitrate of silver ampules, and the cost is small and the increased demand will not be great. This is taken care of in the regular budget of the Health Department, and there is no specific appropriation being asked for in this bill. Anyone attacking it from that angle is in error."

The above mentioned bill is known as House Bill No. 161. Write your legislators immediately advocating the bill, and refute the charge that it will carry an appropriation, also ask your friends and neighbors to aid with this humanitarian measure.

Let me remind you that our State Convention is to be held in Peoria, Illinois, May 16, 17, and 18, 1933, to be followed by our National Convention in Milwaukee, Wisconsin, June 12-16, 1933.

Begin now to arrange to attend both these conventions which may be reached by motor in a few hours from any part of the state. You may gain much information and stimulus from these conventions, and if you have never attended one join your friends there and learn what excellent entertainment is provided.

Your Publicity Chairman again begs each individual, particularly State or County Committee Chairmen and Officers, to keep her informed regarding activities so that she may publish the news regularly.

Mrs. F. P. Hammond,
Publicity Chairman.

Einstein thinks space is just matter in another form. This is the most charitable explanation of the human head yet suggested.—*Brooklyn Times.*

EDUCATIONAL COMMITTEE

January Activities

SPEAKERS' BUREAU

50—Health talks were given before lay groups in Illinois under the auspices of the Educational Committee. The following organizations used the Speakers' Bureau: Women's Clubs, Women's University Clubs, Young Mothers' Clubs, Parent Education Classes, Child Study Groups, Boys Clubs, Parent-Teacher Associations, Y. M. C. A. Lyceum Course, Pre-Medical and Pre-Dental Club of Y. M. C. A. College, Legislative Chairmen of the Illinois Federation of Women's Clubs, Church Societies and Kiwanis Clubs.

These health talks were given by the following members of the Illinois State Medical Society: Doctors Don Deal, Springfield; F. R. Towner, Elgin; Mabel Howe Otis, Moline; M. D. McNeil, Highland Park; J. H. Roth, Kankakee; Harriet M. Daniel Graves, Murphysboro; Mary G. Schroeder, Elgin; John R. Neal, Springfield; Harriet Day Chandler, Decatur; Charles B. Zipf, Freeport; Donald Killinger, Joliet; J. J. McIntosh, Mt. Carmel; R. E. Gordon, El Paso; and from Chicago, Doctors L. J. Weber, Julius Hess, G. Henry Mundt, Arthur J. Cramp, Bertha VanHoosen, Roger W. Hubbard, W. A. Newman Dorland, W. W. Bauer, A. C. Ivy, Cyril Hale, Emmet Keating, J. R. Ballinger, Reinhold Schlueter, Alice Conklin, Edward N. Schoolman, Maximilian Kern, Lena K. Sadler, Joseph Greengard, Gilbert P. Pond, Herbert Rattner, M. P. Borovsky, F. O. Fredrickson, I. Trieger, Arno B. Luckhardt.

The talks were highly satisfactory as indicated by the reports sent in from the above organizations.

SCIENTIFIC SERVICE:

19—Scientific programs were given for county medical societies. The following members of the Illinois State Medical Society whose names are listed with the Scientific Service Committee were called upon by County Medical Society program chairmen:

Vermilion County—Edward J. Stieglitz—"Arterial Hypertension and the Logic of Its Treatment."

Perry County—Frank Deneen—"Colon Disturbances and Their Treatment."

LaSalle County—Philip Kreuscher—"Fractures of the Major Joints."

LaSalle County—Harold M. Camp—"Some Modern Medical Problems."

Lake County—Benjamin Goldberg—"The Recent Developments in Clinical Tuberculosis."

McLean County—M. J. Hubeny—"Spondylolisthesis in Acute Infections."

Will-Grundy County—Clement L. Martin—"Ano-Rectal Diseases; Practical Considerations in Their Treatment."

Paris Hospital Staff—Harold O. Jones—"Obstetrics" —films.

Will Grundy County—Lena K. Sadler.

Belmont Hospital Staff—W. A. Newman Dorland—"The Origin of Ovarian Tumors."

Warren County—Leo Campbell—"Medical Aspects of Diabetes Mellitus."

Warren County—Harry A. Oberhelman—"Surgical Aspects of Diabetes Mellitus."

Warren County—Philip Kreuscher—"Crippled Children's Clinic."

Decatur Medical Society—Francis L. Lederer—"Modern Concepts in the Diagnosis and Treatment of Sinus Conditions."

Will-Grundy County—Joseph K. Calvin—"Some Aspects of Kidney Diseases in Children."

Pike County—Herman H. Cole—"Streptococcus Empyema."

Pike County—Walter Bain—"Diagnosis and Treatment of the Thymus."

Pike County—Don Deal—"Non-Surgical Abdominal Pains."

DeWitt County—James G. Carr—"Treatment of Jaundice."

RADIO:

52—Radio talks were prepared and given by members of the Illinois State Medical Society as follows:

Louis P. River—Hernia.

Joseph Welfeld—Enuresis.

Edward H. Ochsner—Chicago as a Medical Center.

R. W. Kerwin—Nasal Catarrh.

Ben H. Huggins—Chronic Arthritis.

Charles A. Siler—Common Fallacies.

M. T. Strikol—Painless Surgery.

Frank Wojniak—Obstructions of Nasal Breathing.

H. Hoyt Cox—Why Grow Old.

Alex Hershfield—Newspaper Moron.

James Lebensohn—Mysteries of Vision.

Herbert E. Schmitz—Is Cancer Curable?

Berent Hendrickson—Scarlet Fever.

Harry W. Fink—Does It Hurt?

Richard J. Gordon—Convalescent Care.

Charles L. Bidwell—The First Six Weeks of Motherhood.

Charles H. Miller—The Use and Abuse of Medicines.

James T. Gregory—Appendicitis.

Henry H. Conley—Complications of the so-called Head Cold.

Elmer A. Vorisek—The Cross-Eyed Child.

S. L. Governale—The Disabled Gall Bladder.

George Edwin Baxter—Who Is Boss in Your House?

Abraham Levinson—Why Babies Cry.

H. W. Elghammer—The Nervous Child.

Robert O. Ritter—Common Deformities of Childhood.

George F. Munns—Colic in Infancy.

The other talks were given in cooperation with the Chicago Pediatric Society.

PRESS SERVICE:

The following health educational articles were written and approved by the Committee for release over the signature of county medical societies:

Is Cancer Curable	Some Causes of Hoarseness
Why Cough	Nasal Catarrh
Nasal Breathing	Fatigue
Does It Hurt	Hygienic Adjustment in Middle Age
Safety for Children	Development of the Normal Baby
First Six Weeks of Motherhood	Heart Leakage
Felon	Trichinosis
Complications of Cold in the Head	

766—Releases were sent to Illinois newspapers:

491—Regular Press Service.

27—Monthly Service.

33—Cold Articles to Home Advisers of the State.

100—Newspapers, re meeting DeWitt County Medical Society.

34—Newspapers, re meeting Pike County Medical Society.

57—Newspapers—re meeting Warren County Medical Society.

3—Newspapers of Grundy County, material on measles.

4—Newspapers of Union County, material on influenza.

13—Community newspapers of Chicago, Branch meetings.

4—Chicago Association of Commerce, re meetings Chicago Medical Society.

MISCELLANEOUS:

35—Package libraries compiled for members of the Society.

Special material secured on the Report of the Committee on the Costs of Medical Care.

Notices sent to physicians of meetings in Franklin County, Perry County, LaSalle County.

Letters and material for study mimeographed for the Woman's Auxiliary.

Cards mimeographed for meeting of the Woman's Auxiliary, Chicago Medical Society.

Special material on the work of the Committee furnished the State Medical Society of Pennsylvania; Toronto, Canada; Walla Walla, Washington; Manitou, Colorado; two counties of Iowa.

Cooperation given women's clubs and Parent-Teacher Associations.

Moving picture films secured for county medical society and for lay meetings.

Lists of Handicapped children sent to secretaries of all Illinois county medical societies.

Secured cooperation of Chicago Pediatric Society in revising "Diet Lists" used by the Child Hygiene Division of the State Department of Public Health.

Assistance given in diphtheria immunization campaign at Elmhurst.

Secretary invited to become Vice-Chairman of the Public Health Committee of the Woman's City Club of Chicago.

Jean McArthur, Secretary

Only the home can found a state.—Joseph Cook.

DON'T FORGET YOUR INCOME TAX RETURNS

Physicians are reminded to file their Federal Income Tax without delay; they must be filed not later than March 15. The Journal A. M. A. January 14, 1933, gives a summary of the revised law, and discusses the allowable deductions as follows:

THE PHYSICIAN'S INCOME TAX—1933

The taxpayer who is required to make a return must do so on or before March 15, unless an extension of time for filing the return has been granted. For cause shown, the collector of internal revenue for the district in which the taxpayer files his return may grant such an extension, on application filed with him by the taxpayer. This application must contain a full recital of the causes for the delay. Failure to make a return may subject the taxpayer to a penalty of 25 per cent of the amount of the tax due.

The normal rate of tax on individual citizens or residents of the United States, under the Revenue Act of 1932, is 4 per cent on the first $4,000 of net income in excess of the exemptions and credits, and 8 per cent on the remainder.

WHO MUST FILE RETURNS

1. Returns must be filed by every person having a *gross* income of $5,000 or more, regardless of the amount of his net income or his marital status. If the aggregate gross income of husband and wife, living together, was $5,000 or more, they must file a joint return or separate returns, regardless of the amounts of their joint or individual net incomes.

2. If *gross* income was less than $5,000, returns must be filed (*a*) by every unmarried person, and by every person married but not living with husband or wife, whose *net* income was $1,000 or more, and (*b*) by every married person, living with husband or wife, whose *net* income was $2,500 or more. If the aggregate net income of husband and wife, living together, was $2,500 or more, each may make a return or the two may unite in a joint return.

If the status of a taxpayer, so far as it affects the personal exemption or credit for dependents, changes during the year, the personal exemption and credit must be apportioned, under rules and regulations prescribed by the Commissioner of Internal Revenue with the approval of the Secretary of the Treasury, in accordance with the number of months before and after such change. For the purpose of such apportionment a fractional part of a month should be disregarded unless it amounts to more than half a month, in which case it is considered as a month.

As a matter of courtesy only, blanks for returns are sent to taxpayers by the collectors of internal revenue, without request. Failure to receive a blank does not excuse any one from making a return; the taxpayer should obtain one from the local collector of internal revenue.

The following discussion covers matters relating specifically to the physician. Full information concerning questions of general interest may be obtained from the official return blank or from the collectors of internal revenue.

GROSS AND NET INCOMES: WHAT THEY ARE

Gross Income.—A physician's gross income is the total amount of money received by him during the year from professional work, regardless of the time when the services were rendered for which the money was paid, plus such money as he has received as profits from investments and speculation, and as compensation and profits from other sources.

Net Income.—Certain professional expenses and the expenses of carrying on any enterprise in which the physician may be engaged for gain may be subtracted as "deductions" from the gross income, to determine the net income on which the tax is to be paid. An "exemption" is allowed, the amount depending on the taxpayer's marital status during the tax year, as stated before. These matters are fully covered in the instructions on the tax return blanks.

DEDUCTIONS FOR PROFESSIONAL EXPENSES

A physician is entitled to deduct all current expenses necessary in carrying on his practice. The following statement shows what such deductible expenses are and how they are to be computed:

Office Rent.—Office rent is deductible. If a physician rents an office for professional purposes alone, the entire rent may be deducted. If he rents a building or apartment for use as a residence as well as for office purposes, he may deduct a part of the rental fairly proportionate to the amount of space used for professional purposes. If the physician occasionally sees a patient in his dwelling house or apartment, he may not, however, deduct any part of the rent of such house or apartment as professional expense; to entitle him to such a deduction he must have an office there, with regular office hours. If a physician owns the building in which his office is located, he cannot charge himself with "rent" and deduct the amount so charged.

Office Maintenance.—Expenditures for office maintenance, as for heating, lighting, telephone service and the services of attendants, are deductible.

Supplies.—Payments for supplies for professional use are deductible. Supplies may be fairly described as articles consumed in the using; for instance, dressings, clinical thermometers, drugs and chemicals. Professional journals may be classified as supplies, and the subscription price deducted. Amounts currently expended for books, furniture and professional instruments and equipment, "the useful life of which is short," may be deducted; but if such articles have a more or less permanent value, their purchase price is a capital expenditure and is not deductible.

Equipment.—Equipment comprises property of more or less permanent value. It may ultimately be used up, deteriorate or become obsolete, but it is not in the or-

dinary sense of the word "consumed in the using"; rather, it wears out.

Payments for equipment or nonexpendable property for professional use cannot be deducted. As property of this class may be named automobiles, office furniture, medical, surgical and laboratory equipment of permanent value, and instruments and appliances constituting a part of the physician's professional outfit and to be used over a considerable period of time. Books of more or less permanent value are regarded as equipment, and the purchase price is therefore not deductible.

Although payments for equipment or nonexpendable articles cannot be deducted, yet from year to year there may be charged off against them reasonable amounts as depreciation. The amounts so charged off should be sufficient only to cover the lessened value of such property through obsolescence, ordinary wear and tear, or accidental injury. If improvement to offset obsolescence and wear and tear or injury has been made, and deduction for the cost claimed elsewhere in the return, claim should not be made for depreciation.

A hard and fast rule cannot be laid down as to the amount deductible each year as depreciation. Everything depends on the nature and extent of the property and on the use to which it is put. Five per cent a year has been suggested as a fair amount for depreciation on an ordinary medical library. Depreciation on an automobile would obviously be much greater. The proper allowance for depreciation of any property is that amount which should be set aside for the tax year in accordance with a reasonably consistent plan, not necessarily at a uniform rate, whereby the aggregate of the amounts so set aside, plus the salvage value, will at the end of the useful life of the property in the business equal the purchase price of the property or, if purchased before March, 1913, its estimated value as of that date or its original cost, whichever may be the greater. The physician must in good faith use his best judgment and make such allowance for depreciation as the facts justify. Physicians who, from year to year, claim deductions for depreciation on nonexpendable property will do well to make annual inventories, as of January 1, each year.

Medical Dues.—Dues paid to societies of a strictly professional character are deductible. Dues paid to social organizations, even though their membership is limited to physicians, are personal expenses and not deductible.

Postgraduate Study.—The Commissioner of Internal Revenue holds that the expense of postgraduate study is not deductible.

Traveling Expenses.—Traveling expenses, including amounts paid for transportation, meals and lodging, necessarily incurred in professional visits to patients and in attending medical meetings for a professional purpose, are deductible.

AUTOMOBILES

Payment for an automobile is a payment for permanent equipment, and is not deductible. The cost of operation and repair, and loss through depreciation, are deductible. The cost of operation and repair includes the cost of gasoline, oil, tires, insurance, repairs, garage rental (when the garage is not owned by the physician), chauffeurs' wages, etc.

Deductible loss through depreciation is the actual diminution in value resulting from obsolescence and use, and from accidental injury against which the physician is not insured. If depreciation is computed on the basis of the average loss during a series of years, the series must extend over the entire estimated life of the car, not merely over the period in which the car is the possession of the present taxpayer.

If the automobile is used for professional and also for personal purposes—as when used by the physician for recreation, or used by his family—only so much of the expense as arises out of the use for professional purposes may be deducted. A physician doing an exclusive office practice and using his car merely to go to and from his office cannot deduct depreciation or operating expenses; he is regarded as using his car for his personal convenience and not as a means of gaining a livelihood.

What has been said with respect to automobiles applies with equal force to horses and vehicles and the equipment incident to their use.

MISCELLANEOUS

Laboratory Expenses.—The deductibility of the expenses of establishing and maintaining laboratories is determined by the same principles that determine the deductibility of other corresponding professional expenses. Laboratory rental and the expenses of laboratory equipment and supplies and of laboratory assistants are deductible when under corresponding circumstances they would be deductible if they related to a physician's office.

Losses by Fire, etc.—Loss of and damage to a physician's equipment by fire, theft or other cause, not compensated by insurance or otherwise recoverable, may be computed as a business expense, and is deductible, provided evidence of such loss or damage can be produced. Such loss or damage is deductible, however, only to the extent to which it has not been made good by repairs and the cost of repair claimed as a deduction.

Insurance Premiums.—Premiums paid for insurance against professional losses are deductible. This includes insurance against damages for alleged malpractice, against liability for injuries by a physician's automobile while in use for professional purposes, and against loss from theft of professional equipment, and damage to or loss of professional equipment by fire or otherwise. Under professional equipment is to be included any automobile belonging to the physician and used for strictly professional purposes.

Expense in Defending Malpractice Suits.—Expenses incurred in the defense of a suit for malpractice are deductible as business expenses.

Sale of Spectacles.—Oculists who furnish spectacles, etc., may charge as income money received from such sales and deduct as an expense the cost of the article sold. Entries on the physician's account books should in such cases show charges for services separate and apart from charges for spectacles, etc.

MEETING OF THE AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The American Board of Obstetrics and Gynecology proposes to hold the first of a series of annual dinners for Diplomates of the Board and their friends on the first day of the Scientific Session of the American Medical Association meeting in Milwaukee, at which time the successful candidates from the examination of the day before will be introduced in person, one or more addresses will be made by officers of the Board and a Round Table Conference and general discussion of the activities of the Board will follow. Diplomats expecting to be in attendance at the Scientific Session of the American Medical Association are urged to make reservation for this subscription dinner as early as possible through the office of the Secretary of this Board. Further announcements will be made through the Journal of the American Medical Association and the American Journal of Obstetrics and Gynecology.

The next written examination and review of case histories will be held in cities throughout this country and Canada, where there are Diplomats who may be empowered to conduct the examination, on April 1, 1933.

The next general, clinical examination is to be held in Milwaukee on Tuesday, June 13, 1933, immediately preceding the annual session of the American Medical Association. Reduced railroad rates will apply.

For further information and application blanks, address the Secretary, Dr. Paul Titus, 1015 Highland Building, Pittsburgh, Pennsylvania.

BLAME THE SECRETARY

Contributed by E. A. S.

If your Lodge is on the bum,
Blame the Secretary;
If your members will not come
Blame the Secretary;
Don't take hold and do your part,
Don't help give the thing a start,
Show them all that you are smart—
Blame the Secretary.

If the programs are a frost,
Blame the Secretary;
Don't help put the thing across,
Blame the Secretary;
If the eats aren't what you like,
Threaten to go out on a strike.
Don't help—for the love of Mike—
Blame the Secretary.

When you get a bill for dues,
Blame the Secretary;
When you're asked to help, refuse,
Blame the Secretary;
Why should he be seeking aid?
For you know he is well paid!
That is why his job is made—
Blame the Secretary.

Original Articles

WHEN THE CAUSE OF HEART DISEASE IS OBSCURE*

Emmet Keating, M. D.
CHICAGO

Pathological changes in the human body, associated with heart disease, can always be demonstrated by a careful history, physical examination and laboratory aids. An examination of this kind will usually reveal the primary cause of heart disease. However, we see many patients where these measures have been faithfully carried out and the primary cause is not found. When patients present themselves with sore throat, persistent cough or a urethral discharge, the cause is our chief concern. In these conditions prompt and intensive measures are instituted to discover the cause. In the case of heart disease the cause plays the chief role, but its discovery is often difficult and not always energetically sought.

There is no question as to the importance of finding the cause in the case of heart disease, but a great amount of time and expense is sometimes involved in discovering it. The public is not convinced of the necessity of incurring the expense, and usually deserts the physicians who urge a procedure of this kind and seeks the advice of those whose abbreviated methods more nearly conform to the patient's ideas of what is sufficient in the way of an examination.

The practice of "See your dentist twice a year" is not inspired by a desire to preserve health, but is prompted by two ever present urges of the human race—vanity and the knowledge that an aching tooth will interfere with the taking of food.

The public does not know that the foundation of beauty is good health. If that fact were thoroughly understood the doctors' offices would be as well and frequently patronized as are the beauty shops.

The majority of people who have never suffered any pronounced physical distress, pride themselves on their record of never having consulted a doctor. It often happens that when these people reach the age of 45 to 50 years,

*Read before Section on Medicine, Illinois State Medical Society, Springfield, May 18, 1932.

they suddenly find themselves tiring easily and becoming dyspneic on very slight exertion. These patients give no history of ever having been, even comfortably, ill.

Had these unfortunate people been examined twice a year from the time they were children, and a carefully written record preserved, conditions of major importance, but of seemingly small consequence to them, would have been discovered and ameliorated or cured. The incidence of rheumatic heart disease and syphilis; their presence known to the physician, would receive not only immediate attention, but the patient would be instructed and guided in his mode of living. In the case of rheumatic heart disease, his threshold of endurance would be established and understood by himself, while recurrence of uncured syphilis would receive necessary, timely and periodic treatment.

The causes of heart disease are—

1. Rheumatism
2. Syphilis
3. Focal infections
4. Trauma
5. Congenital defects

To discover the major cause of the relatively sudden breakdown of the middle aged patient, is in many cases a most difficult problem. Physical examination of these patients reveals a condition of myocardial degeneration, ranging from moderate impairment to irreparable injury. The amount of kidney involvement is often found to be in proportion to the damage suffered by the heart.

It is not always easy to find a single pathological entity of sufficient magnitude to account for the patient's condition. The most painstaking and diligently made physical examination will not reveal it. Multiple laboratory tests, the determining of the basal metabolic rate, the electrocardiogram, and the x-ray picture of the chest provide graphic pictures and permanent records corroborating the physical findings of departures from the normal. These aids frequently show evidence of disease not discovered by the physical examination. Such tests are very necessary parts of the patient's record, but often are of small help in arriving at a correct conclusion as to the original reason for the damage to the heart.

The careful physical examination, the laboratory tests and the mechanical devices used in the study of the patient's body make known the presence of certain definite and unmistakable pathological conditions but do not reveal the primary cause of the unexpected breakdown. When confronted with this situation, a diagnosis of endocarditis, myocarditis or cardio-renal disease is of limited value in determining the therapeutic requirements and is of small benefit to the patient as a starting point for restoring him to health.

The recognition of various pathological conditions affecting the patient, makes it possible to form a fairly accurate opinion as to the prognosis; but when the satisfaction of having made a comprehensive diagnosis adds nothing to our knowledge of the fundamental cause and is of no help to the unfortunate patient, we are aroused to the necessity of undertaking further study of the problem. The information that has been obtained by careful clinical and laboratory study of the patient, at the expense of so much time and effort, is of paramount importance to the advancement of our knowledge of heart disease and adds something to the comfort of the patient. For these reasons alone all patients should have the benefit of this type of examination.

If the heart and kidney impairment is mild in character, a carefully arranged program looking to the correction of various disturbing factors, can be carried out in so leisurely a manner that the patient,with greatly diminished resistance, is not placed in jeopardy by the institution of measures that must be neither too aggressive or enthusiastic in character.

When the damage has progressed to the point where a few days rest in bed fails to produce marked or even noticeable improvement, the treatment to be undertaken becomes a most baffling question. We find ourselves confronted by a multitude of small and sometimes major serious disturbances, no one of which it would seem reasonable to suppose could be responsible for so grave a condition of the heart.

With no history of the patient having suffered from any of the diseases so common to childhood, from rheumatism or the venereal diseases, our attention is turned to the study of whatever focal infections the patient may harbor. Clinicians do not seem to be much nearer an agreement as to the role that focal infec-

tions play in causing heart disease than they were when the claims and proofs of the part played by focal infections were submitted to the medical profession several years ago.

White[1] gives the impression that aside from syphilitic infection of the nose, other disturbances of the nose, or inflammatory conditions of the sinuses, are not to be regarded seriously as contributory causes of heart disease. He has the same opinion of infections of the teeth, gums and ears. He thinks the tonsils should receive careful attention because of their connection with rheumatism. This opinion is shared by other text-book writers of recent years.

Opposing these views, is the work of Jones and Newsom,[2] who, for the purpose of studying the effect of focal infections of the teeth upon the heart, made some very careful experiments by filling the pulp cavities of dogs' teeth with streptococci cultures.

"Dental abscesses were demonstrated in all inoculated dogs. The hearts of inoculated dogs constantly showed very small vegetative or verrucose mitral and (or) aortic endocarditic lesions, patchy parenchymatous degeneration, nuclear changes, increase in the diameter of the muscle cell and a slight round cell infiltration. A positive relationship between experimentally produced focal dental infecton and cardiac hypertrophy as measured by diameters of muscle cells was noted."

The partial or entire correction of focal infections is not rewarded by the complete disappearance of established pathology. Many times the symptoms of heart involvement persist. However, this well established fact is not an argument for the relinquishment of vigorous and sustained efforts on the part of physicians to establish an approach to a normal hygiene of the nose, middle ear and accessory sinuses, and the prompt removal of infected tonsils. The constant bombardment of an already damaged heart by the toxines of even small and seemingly unimportant foci of infection are certain to add a burden that it is illy prepared to withstand. With rheumatism, the infectious diseases that affect children, toxic goiter of short duration, congenital defects and trauma ruled out, we turn hopefully to syphilis only to have those hopes dampened by the laboratory report of negative blood and spinal Wassermann tests. I use the term hope advisedly, for in the desperate cases, syphilis is the only injurious agency that is amenable to treatment. To illustrate the difficulties of arriving at correct diagnosis of primary causes, I submit a synopsis of the history, physical examination and laboratory findings of a patient.

Mr. C. H., American, aged 50 years, married, insurance solicitor, complains of dyspnea on slight exertion, gastric distress with nausea, loss of weight and weakness, loss of appetite and sleep. He felt well until four months previously, when the above symptoms appeared and steadily progressed in severity. Exertion such as dressing and shaving causes dyspnea. His loss of weight was 20 pounds. He consulted a physician who made a diagnosis, confirmed by the electrocardiogram, of auricular fibrillation, and was given large doses of digitalis, with no arrest of the fibrillation and no improvement.

Aside from some gastric disturbance, the patient had no diseases during his childhood. Nor until four months previously, with the exception of a gonorrheal infection, did he suffer any subsequent illness.

His father died, age 78; his mother, aged 65, cause of death unknown. No family history of tuberculosis, carcinoma or diabetes.

The patient has been married twice. First wife bore three children who are living and well. Patient was divorced. Second wife bore him three children, living and well. She had one miscarriage which he thinks was the second pregnancy. He was a moderate smoker and a moderate drinker. He was successfully engaged for several years in a business that failed. He then become an insurance solicitor.

Physical Examination.

A well developed, white male, presenting an appearance of extreme pallor. His body is free from lemon tint and bronzing.

His hair, scant, and was gray at the age of 35. His expression, anxious. Although there is no nasal obstruction he breathes through the mouth. The pupils react fairly promptly to accommodation and sluggishly to light. Following the use of a mydriatic, examination of the eyegrounds reveals no pathology. Both ear drums show evidence of chronic otitis media. There is no tremor or deviation to right or left of the protruded tongue. The under surface of the tongue presents many petechiae. Patient has two removable bridges. The remaining teeth, with the exception of three or four in the lower jaw, are in bad condition. The pharyngeal reflex is fairly active. The tonsils are small and ragged. There are no undue visible pulsations in the neck and no palpable lymphatic glands. Thyroid is moderately enlarged, firm and freely movable. Examination of the lungs reveals no pathology other than the congestion resulting from a crippled heart.

Heart: Apex beat is palpable fifth interspace 4⅝ inches to left of mid-sternal line. Heart dullness is noted 6 inches to left of mid-sternal line. No thrills. There is a systolic murmur at the apex transmitted to the tricuspid area, upward along the left border of the sternum and to the left as far as the posterior

axillary line. The first sound at the apex is slightly accentuated. Also the first sound at the tricuspid area. The tones are fairly clear. There is no tenderness over any part of the abdomen. Increased rigidity over the upper third of the right rectus muscle. The liver is felt at the costal margin. Kidneys not palpable.

Varicose veins in the scrotum are noted. The prostate is small, smooth, moderately firm and not tender. Rectum shows no pathology on digital examination. There is no edema of arms or hands or clubbing of the fingers. No edema or varicose veins of legs or feet. Abdominal reflex is very active, cremasteric and patellar reflexes present. Tendo Achillis reflex elicited in left leg. Co-ordination is good. There is a coarse tremor of the extended fingers. No Romberg. No ataxia. No Babinski. No ankle clonus.

Laboratory Findings: Urine: specific gravity 1030; albumin 1 plus; sugar, negative; amorphous urates; many granular and hyalin casts, many pus cells, few blood cells and abundant mucous shreds.

Blood: Hemoglobin 85%; RBC, 4,980,000; WBC, 13,400; small lymphocytes 26; large mononuclears 1; polymorphonuclears 72; eosinophiles 1; non-protein nitrogen 70 mgr. per 100 cc blood. Blood and spinal Wassermann negative. Basal metabolic rate, plus 60. Electrocardiogram shows evidence of myocarditis and auricular fibrillation. Ventricular rate 160.

Radiograph showed hypertrophy of the heart.

Diagnosis—Toxic goiter. Chronic endocarditis. Chronic myocarditis. Auricular fibrillation. Parenchymatous nephritis. Chronic tonsillitis. Chronic otitis media. Chronic gingivitis. Varicocele.

The diagnosis of these several conditions is well established but the primary cause of the heart condition remains a matter of conjecture. The myocardial changes as shown by the physical examination, electrocardiogram and x-ray are not the result of a toxic goiter of short duration. The patient gives no history of rheumatism, and while grave myocardial changes do follow an insignificant sore throat, we cannot claim with certainty that this is a case of rheumatic heart disease.

Both blood and spinal Wassermann reactions for this patient were negative. Rest in bed and symptomatic treatment has been of no avail. It is well to remember that syphilis frequently gives rise to thyroid disturbance, that deceives the physician and as a result the goiter is too often treated surgically. We cannot institute effective treatment if we do not know the primary cause of the patient's heart disease. For this sudden and early decline in a healthy man between the age of 49 and 50, we cannot fall back upon the diagnosis of general arteriosclerosis. An intelligent and hitherto active man is rapidly approaching death. We must admit our inability to prevent this, but we should not condone our helplessness. What can be done to strengthen our efforts to discover primary causes in these cases? In addition to what has been already accomplished, there are three things, the first two entirely possible, the third hedged about by seemingly unsurmountable difficulties.

1. The periodic physical examination of all people from birth until death.

2. Careful and renewed study of the histories, physical findings and laboratory reports of our patients in whom the primary cause of heart disease is indisputably established. By a painstaking comparison of these details with the details of the findings in patients where the primary cause is obscure, we will, in an increasing number of cases, be able to correctly diagnose the original cause of heart disease.

3. The greatest aid, the autopsy, which should include careful studies of joint structures, is seldom available. In America we are handicapped by not being able to obtain autopsies on the bodies of private patients. County officers, in their fear of giving offense, have gone so far as to permit the relatives of patients dying in county hospitals to refuse permission to post the bodies. While sentiment plays a large part in the scarcity of autopsies on private patients, it is not the main factor. Medical society discussions of how to obtain autopsies are frequent, but efforts to change public opinion are feeble. Make a desirable thing profitable and its popularity is assured. The great deterrent to the performing of autopsies on the bodies of private patients is lack of money with which to pay competent pathologists. It is not fair to put this financial burden upon the physician. It is too much to expect the family of the deceased to pay this charge and they seldom do, unless legal entanglements are expected. To popularize the doing of post mortems and to make them a matter of course; all physicians should insist that when death closes the chapter, their bodies should be autopsied and the results published in the public press. The medical profession might take steps to persuade laymen to contribute endowment funds for this purpose. If the money for doing post mortems were available, sentimental antagonism would quickly

vanish. Pathology would become an attractive field to a larger number of medical men and that science would thereby be materially advanced.

The works of man — bridges, railroads, cathedrals and other structures, given regular and constant inspection and service, are kept in operation for generations and centuries. For himself, man has accepted the dictum that his days are "few and full of trouble" and sees not the necessity of having himself regularly inspected and repaired.

2800 Milwaukee Avenue

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2. Jones & Newsom: Archives of pathology. Vol. 13, No. 3, 1932.

DISCUSSION

Dr. Frank Deneen, Bloomington: No doubt, as Dr. Keating pointed out, the physical examination repeatedly done from early childhood would probably uncover many of the obscure causes of heart trouble.

It seems as though in the past fifteen to twenty years we have changed materially upon our ideas of the frequency of the different causes of heart trouble. Fifteen years ago, of course, the most frequent thing was the so-called rheumatic group, which included scarlet fever. Then came syphilis and cardiorenal hypertension, and lastly thyroid. Today there is also a group that seems to be increasing and apparently greatly increasing. That is the type of myocardial failure with the production of a right-sided hydrothorax that goes on progressively in the course of a few months down to the death of the patient.

Apparently there is no solution for that type of death, and yet we are seeing more of those cases right along. They do not respond to treatment in any respect.

The scarlet fever type should diminish if the work being done at present with the use of our scarlet fever antitoxin proves valuable during a period of a severe scarlet fever epidemic.

We must look things squarely in the face though in regard to the thyroid. We have dealt much with the heart hyperthyroidism and all of its branches. As a result, we have had a great number of increased operations and out of that you must, of necessity, get a large per cent of hypothyroid cases. The hypothyroid condition does bother the heart. This condition responds rapidly to treatment. We must face this. It is becoming an increasing problem. It is going to increase as long as it is necessary to do thyroidectomies and also due to the fact that we are still in a period when probably more thyroidectomies are being done than are necessary.

When you have a heart for which you cannot determine the cause and the Wassermann is negative and there is a weakened lower pulse pressure, with some irregularity of pressure, and your electrocardiogram is relatively negative, it is going to be a good plan to start that patient on a syphilitic treatment on general principles and not wait to establish the definite cause; and you will be surprised at the number of these patients who will have a marked improvement.

The coronary type, of course, still remains unsolved and unknown; and we are undoubtedly interested in that type from a selfish standpoint on account of the great increase in the number of doctors who are "going out" with coronary disease.

I believe that we still have two great problems, one the progressive myocardial insufficiency, if you want to call it that, and the coronary type. I have no suggestions to make as to how that problem can be solved.

Dr. Emmet Keating (closing discussion): The prognosis for these patients is bad. In this case, despite the negative blood and spinal Wassermann, the patient was given anti-luetic treatment which was ineffective. The surgeon who referred the case did not think a thyroidectomy advisable, because of the poor condition of the patient.

INTERNAL OCULAR HEMORRHAGE*

ALEXANDER E. MACDONALD, M.D., F.R.C.S.(C), D.O.M.S.

TORONTO, ONT.

The purpose of this paper is to show the relationship between the clinical and the pathological pictures resulting from hemorrhage of the ocular vessels.

For a structure composed mostly of transparent avascular media the eye is richly supplied with blood vessels and even a small lesion may decrease vision, which is the function of the eye, to a serious degree.

Anatomically there are several points of interest. The retinal vessels are end arteries which do not anastomose, except occasionally with ciliary branches at the disk. This collateral twig found in 17%, explains why part of the retina may function when an embolus has lodged in the central artery of the retina. The retina is developed embryologically from neural ectoderm and its blood supply is derived intracranially from the internal carotid. Hence we see arterioles and capillaries with the ophthalmoscope, magnified 15-16 times lying in a transparent structure and similar to the vessels of the central nervous system. Blood pressure measurements are interesting but they do not convey information for diagnosis and prognosis comparable to that derived from the direct observation of the fundus.

*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Society, at Springfield, May 18, 1932.

A practical point arises directly from the type of the retinal artery. When an embolus has lodged in this vessel immediate massage may force the obstruction into one of the smaller branches. I have recently seen a patient who suddenly, after massage, recovered good vision in a partial embolism of the upper temporal branch some 10 days after the onset of blurred vision.

Immediate paracentesis also may restore good vision in an eye blind from embolism of the retinal artery by lowering the tension of the eye and causing a dilation of the vessels so that the embolus may be forced on into a branch.

Physiologically it is of interest that the secretion of the intraocular fluid admits agglutinins and precipitins to the interior of the eye while hemolysins are barred.

Hemorrhages reduce vision by:

1. Interfering with the transparency of the media.
2. Displacing the percipient rods and cones.
3. Blocking the escape of the intraocular fluid.
4. Displacing the conductive mechanism of the eye.
5. Obstructing the non-supported dura of the optic nerve.

Following trauma or operation more or less severe accumulation of blood is seen in the anterior chamber. The red blood cells tend to settle to the lower part and are removed via the filtration angle; at times a greenish staining of the cornea may occur which clears slowly from the periphery. Hemorrhage into the vitreous is generally arterial as the internal limiting membrane restricts venous hemorrhages which are of the subhyaloid type. Vision is greatly reduced and the red reflex may be abolished. Following gross hemorrhages there is a tendency for secondary glaucoma and hence atropin should not be used, miotics are likely to cause severe pain and iridectomy is contraindicated, on account of the possibility of further severe hemorrhage. When not great in amount the red blood cells are slowly removed, but connective tissue may invade the vitreous by way of the rupture and produce retinitis proliferans, or the degenerated products may be seen as bright cholesterin containing masses in synchysis scintillans in spite of which normal vision is possible.

Preretinal or subhyaloid hemorrhages are usually venous in origin. The red blood cells tend to sink to the lower part and the blood serum rises so that in the course of a few days a definite border is seen. When they occur in the macular region the vision is greatly reduced.

Hemorrhage into the retina results from over 18 different conditions. The structure of the retina fixes their type and we are able to distinguish the bright red flame-shaped hemorrhages that have a ragged border, on account of the difficulty the red blood cells find in spreading against the direction of the axis cylinders of the fibro-vascular layer of the retina. Many of these must be of capillary origin and at times it is difficult to distinguish between dilated capillaries and fine fibro-vascular hemorrhages. When they occur into the deeper layers they are punctate and darker in type. It is surprising how severe they may be and how widely scattered over a fundus with little decrease in vision; on the other hand, small macular hemorrhages may reduce vision to hand movements. They may be absorbed completely and leave no trace, or fine crystals, or bright white areas may be found scattered about the retina as in the so-called retinitis circinata. Usually in this condition fresh hemorrhages are to be seen.

Sclerosis of retinal vessels. We, as ophthalmologists, should I think occasionally pause for a stocktaking. Ours is usually considered a limited specialty and in recent years the electric ophthalmoscope has placed in the hands of neurologists, internists and the student the means of easy access to valuable information and no one would wish it otherwise as it helps to overcome the gaps in our knowledge. It is hardly possible for us to know sufficient medicine, and co-operation will result in more accurate diagnosis and what is of primary importance to the patient, sure prognosis.

We should not be led astray by the all too frequent reiteration of high sounding terms. Careful observation faithfully recorded is necessary. It is so much easier to place a diagnosis such as arteriosclerotic retinitis, than to say that there is a high reflex to the artery, engorged veins, right angle crossings, with increase here of connective tissue to obliterate

the view of the vein, etc. In the first place the retinitis term is wrong, it is rather a degenerative process than an inflammation. Thus we add to the shaky superstructure. Again we speak of an arterial hemorrhage. Frequently I am sure these are from precapillary arterioles or capillaries themselves. With a magnification of 15 times we are able to see capillaries as you who use the Biomicroscope are well aware. Also the deep retinal hemorrhages must be from capillaries, as these vessels alone are present in the deeper retinal layers. Benign, essential and malignant hypertension are ponderous terms but should be used with discretion. Time will confirm or disprove our diagnosis.

Foster Moore, Gunn, Coates, and in this country De Schweinitz, Lancaster, Keith and Wagener and others have attempted to place our knowledge of retinal vessels on a better but by no means solid foundation.

The red reflex of the fundus is derived from reflected light, due to the intense blood supply of the choroid altered by the pigmented epithelium of the retina. When exudates collect in the retina or between the rods and cones and the pigmented epithelium, then the red reflex is absent in these areas and the light is directly reflected by these accumulations. The spectacular type of fundus, splashed with great blobs of white exudate may look very different when seen in microscopic section. The large patches of white or grey coloured exudate correspond to accumulations in the subretinal area where the retina is grossly detached so as to interfere with the reflection of light from the choroid. According to their location finer areas of exudate present a white reflex when superficial, or grey appearance when deep.

105 eyes, or about 25%, in a series of 424 showed recent hemorrhages; of these 4.2% had intraretinal hemorrhages, while 10% had subchoroidal hemorrhages, and less than 1% had massive subchoroidal hemorrhage following cataract extraction.

The high percentage of choroidal hemorrhages seems important and especially so as only one-half gave a history of recent trauma other than operative procedures.

Optic neuritis. The optic neuritis group (so-called) show a clinical picture without definite ophthalmoscopic differentiations. Swelling of the nerve head is so frequently associated with hemorrhagic exudates and swelling of the surrounding retina, that the fundus picture alone, only gives a clue to further methods of examination that must be completed in conjunction with the internist or neurologist.

1. The hydrodynamic group, including papilledema due to brain tumor, hydrocephaly, or oxycephaly or orbital tumors, is not an inflammatory process but due to the obstruction of the outflow through the central vein of the optic nerve. It is not necessary here to recall the appearance of this condition and the diagnosis of brain tumor. Cushing says, "that of all the organs of the body, with the possible exception of the uterus, the brain appears to be the most frequent seat of neoplastic disease." Other observers place the uterus, breast, gastrointestinal tract and brain in order of their susceptibility to neoplastic disease. Papilledema is present in 75% of intracranial tumors. 90% of papilledema is caused by intracranial tumors. While 77% (Cushing) show abnormality in the visual fields. The ophthalmologist sees these cases first and when the classic symptoms of papilledema, headache and vomiting occur, it usually means that the case is too advanced for successful surgical intervention.

2. Inflammatory optic neuritis; a papillitis occurs in descending acute meningitis and it may occur in orbital cellulitis without invasion of the meninges about the optic nerve. It is probably very rare in disease of the accessory nasal sinuses but it does occur in chronic tuberculosis and in syphilis.

3. The metabolic disorders are important producers of retinal exudates and hemorrhage. A urine and possibly a blood chemical examination is necessary in every case showing retinal hemorrhages or exudate. I have sections to show these conditions and will not delay here.

4. Hyperpiesis or hypertension cases may show papilledema, exudate, and hemorrhages. The vessels themselves give a clue. When severe and of the malignant type, life is in danger and the patient usually dies in less than two years.

Such diverse conditions as Leber's hereditary retrobulbar neuritis, drug poisoning with arsenic, lead and alcohol, certain menstrual and lactation disorders, or traumatic conditions such as commotio retinae, lightning and electric

shock should be borne in mind as causing edema and hemorrhage and exudates into the retina. Orbital tumor may also, by interfering with the central retinal vein, produce a similar picture.

Thrombosis of the central vein, a branch or even a macular twig are causes of multiple retinal hemorrhages. Most of the cases with complete obstruction of all branches progress, in about two years, to absolute glaucoma. A mydriatic must not be used when extensive hemorrhage has occurred intraocularly and when glaucoma does supervene a miotic will cause severe pain. Operative procedure is fraught with dangers owing to the liability of severe hemorrhage.

Single branch thrombosis interferes with the vision markedly when a temporal branch is involved and to a lesser degree when a nasal branch is affected. The macular twig of the temporal branch may be involved alone and fair vision is maintained.

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DISCUSSION

Dr. George F. Suker, Chicago: It is unfortunate that the attendance is so limited this year, but a paper of this character is worthy of all the discussion the time will permit. Relative to the vessels of the eye-ball, I am quite sure that they are no different than any other vessels in other parts of the body with this modification that the central retinal vessel is an end-artery. They are subject to the same laws physiologically and pathologically as are the other vessels. Lymphatic vessels are absent in the eye ball and are only found in the episcleral tissues.

It is my belief that a thrombosis is preceded by an endophlebitis and should be treated accordingly. I recently had the good fortune to see such a case and follow it through the stages of a mural thrombus and later develop a complete thrombus with the classical picture of such a case. Relative to minute hemorrhages in the retina, these macular or flame shaped types, I am inclined to think they are not due to rupture of the vessels, but due to wide dilatation of the capillaries. We do know that such dilatation can be produced experimentally which will permit the escape of not only serum but red and white corpuscles.

Dr. MacDonald's diagrammatic picture of the position and torsion of the central retinal vein in papilledema is very interesting and new to me. It represents a theory that is distinctly attractive to the edema of the nerve-head controversy. I think we are indebted to Dr. MacDonald for coming so far to give us this very interesting paper.

Dr. Alexander E. MacDonald, Toronto, Ont. (closing): Before such a scientific body it is hard to tie oneself down to a discussion of the types of hemorrhage. Outside the laboratory it is very difficult to settle these disputes. I hope to have the opportunity to show Dr. Suker some of the specimens I have, and I am very glad that he discussed this paper. I am inclined to believe that he looks on it too much from the laboratory side. I need a dozen or so more years of clinical experience. I think it is important to co-relate these findings.

The last diagram I showed on the screen was my own drawing. I disagree with Leslie Paton and some other observers who say the hemorrhage from the subarachnoid space breaks through the cribriform plate and passes into the eye. As you can see there is no break at the cribriform plate. The pressure is outside, the pressure of arterial blood, and damming back due to obstruction, causes the hemorrhage.

I wish to thank both the gentlemen who discussed this paper.

RECENT DEVELOPMENTS IN THE TREATMENT OF CHOREA MINOR*

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Medical literature abounds with numerous methods for the treatment of chorea minor in children, all highly praised by their advocates. Since chorea is recognized as a more or less self-limited disease, a certain amount of scepticism accompanies any claim of cure. The fact that such numerous modes of therapy have been advanced and tried in this disease also serves to indicate that no one form of treatment has become of sufficient success that its general use is warranted in each case. Mere mention of such multiple forms of therapy as sodium salicylate, arsphenamine, bromides, magnesium sulphate, thyroid extract, luminal, chloretone, milk injections, and the use of the ketogenic diet serves to bring out the non-acceptance by the profession of any rational and undisputable method to be carried out in the treatment of cases of chorea minor.

However, in recent years, particularly in continental Europe and the British Isles, numerous favorable reports have appeared in the literature concerning the use of nirvanol or phenylethylhydantoin as the mode of therapy which seemed to be producing the best results in chorea. It was my privilege to attend the meeting of the British Pediatrical Association at Buxton in 1929, at which time Schlesinger reported favorably on the use of nirvanol in chorea, and advised its further investigation and usage.

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It was my opportunity to make clinical observations on eleven cases treated in the East London Hospital for Children in 1929 with the use of nirvanol which have been reported; and subsequently, I have used the drug in five cases in private practice. In all of these cases, the end results were favorable enough to warrant, in my mind, a greater acceptance and use of this form of therapy as being the type of treatment which will probably produce the best results, of any known form of therapy existent today, particularly in severe cases of chorea minor.

The articles appearing in the English and American medical journals on the use of nirvanol are not numerous. Most of the work in this country has been done by Ray and Cunningham[1] at the strong Memorial Hospital in New York in 1930; by Pilcher and Gerstenberger[2] of Cleveland, also published in 1930; and by Marick[3] of Pittsburgh, published in 1931. However, the German literature contains extensive reports on the use of this drug. It was first introduced in Germany in 1918 as a sedative and general hypnotic, and was first used in the treatment of chorea minor in 1919 by F. Roeder[4] who gave the drug to a seven-year-old child developing the resultant "nirvanol sickness" after seven days administration of the drug, followed by a rapid diminution of the chorea. In subsequent years, several articles have appeared in British journals by Poynton and Schlesinger,[5] Ashby,[5] and myself[5] dealing with the use of nirvanol in chorea, while far more numerous accounts occupy the German literature.

Nirvanol or phenylethylhydantoin is peculiar in that it is one of the few drugs in medicine which when given over a consecutive period of days will produce a syndrome which is clinically evidenced by a rash, fever, and increased pulse rate, appearing usually about seven to fourteen days after continuous administration of the drug. Nirvanol belongs to the barbituric acid group, and its chemical formula is closely allied to luminal, having one more CO group than luminal.

To produce the "nirvanol sickness" of Pfoundler, the drug is given orally in tablet form, a dosage of 0.3 gram per day to a child of three to fourteen years, and continued daily until the appearance of an exanthem or enanthem or both. With the appearance of the exanthem or enanthem, or in rare cases in which these phenomena are not present but only a pulse rise occurs, the drug is stopped. Two to four days before the onset of the fever and rash, drowsiness may be noticed, while some observers have stated that an aggravation of the choreic manifestations may occur at this time, before the development of the reaction. In my own cases, the drowsiness was a rather consistent premonitory manifestation of the approaching "nirvanol sickness." During the administration of the drug, it seems best to keep the patient at bed rest in view of some of the unpleasant manifestations which may occur and which will be mentioned subsequently.

With such points in mind, it is necessary to be on the lookout for early evidences of an effect from the drug as shown by the appearance of fever, rash, or pulse rise, any one of which necessitates a stopping of the drug. In not every case does this triad appear; but in my cases, all showed one of the three mentioned indications of a reaction, or if none of these, at least a blood eosinophilia, which of itself may rarely be the only evidence from a clinical standpoint of a reaction having occurred other than the improvement in choreic symptoms. The rash is ofttimes the first sign of a reaction. Occasionally it is so faint a careful search is necessary. Usually it appears first on the trunk, on the extensor surfaces of the forearms, and on the buttocks. In most cases, it will become generalized and involve the palms and soles of the feet. It is most often morbilliform in character, and remains discrete, but sometimes becomes confluent on the elbows and knees. Urticarial and scarlatiniform types are known, but in my experience, I have only seen one rash other than morbilliform in type. The face seems to escape the eruption, but ofttimes shows slight edema and a circumoral pallor. Accompanying the rash in most cases, as previously mentioned, there is a rise in temperature to 102 to 104 degrees with an accompanying rise in the pulse rate. Usually, the rash and fever subside in three or four days. Cases may remain afebrile during the course, and yet develop a marked rash as occurred in two of my cases; or they may have no rash but have a fever; or they may show neither a rash nor fever. Most observers obtain a general reaction as evidenced by temperature, rash, and pulse rise in about three-

fourths of their cases. In general, it may be said that the fever seems proportional to the extent of the rash.

As regards the period of the administration of the drug, if no signs of reaction ensue within fourteen days, de Rudder[6] feels that it is useless to administer the drug for a longer period. However, in three of my cases receiving the standard dosage of 0.3 gram per day, it was necessary for the drug to be administered for fifteen, seventeen, and twenty-two days respectively before signs of "nirvanol sickness" appeared. It must be said here that it is probably unwise to administer the drug longer than fourteen days unless the child is in the hospital, or where it can be carefully watched for any untoward symptoms and reactions. (Although I have never observed such, they have been reported.) Following the diminution of symptoms and signs of the "nirvanol reaction" or during it, a diminution in the choreic manifestations is noticed. This may be almost dramatic in its suddenness, but in most cases, the improvement tends to occur within the first week or ten days. Many of these patients lose their coarse, purposeless body movements, but may retain the finer movements, that is, tremor of the hands, for several weeks after the reaction. We would expect that some slight tremor of the hands might exist for several weeks since chorea appears to be the result of a cerebral lesion with gross structural changes of an inflammatory or degenerative type which would not be speedily repaired. Cases apparently resistant to nirvanol are seen in that no rash, fever, or pulse rise may occur after full dosage. Examination of the blood is very important in these patients at the expected time of reaction, since it appears, according to Poynton and Schlesinger,[5] that eosinophilia may at this time be the only apparent evidence of "nirvanol sickness." In two of my cases, such was true. This finding of eosinophilia is the most common blood finding in response to the drug, and occurs at the height of the reaction. In two weeks, the eosinophilia has disappeared. In all cases in which nirvanol treatment is used a preliminary complete blood examination at the onset of the administration of the drug should be carried out. It must be remembered that eosinophilia may occur in chorea without administration of nirvanol. Berger[7] reports forty cases with a general average of 7.6%, and found no relation between the severity of the chorea and the percentage of eosinophils. In my own cases only six of the sixteen showed an eosinophilia percentage above 2% when first seen, but with the administration of nirvanol twelve of the sixteen showed a definite further increase. The degree of eosinophilia seems to be of little value in estimating the rate of recovery from chorea. Too much stress cannot be placed upon the matter of watching the blood, both from the standpoint of noting eosinophilia and being on the watchout for any marked decrease in total white cell count. The lowest leucocyte count which I have observed has been 4,800. In general, it can be said that those cases showing a definite general reaction as evidenced by rash or fever with or without eosinophilia seem to improve the most rapidly, but two of my cases did definitely improve without the aforementioned symptoms. Urine examination on admission and at the height of reaction showed no variation from the normal. Examination of the red blood cells and hemoglobin two weeks after the reaction showed no alteration from the existent count before the drug was administered. In only three of my cases were there existent cardiac lesions and no evident change was noted in the cardiac status during treatment. The drug has been administered to children apparently in normal health and a typical "nirvanol sickness" develops so there is no evidence that the "nirvanol sickness" is a reaction confined solely to choreic individuals.

As regards the action of nirvanol, there is considerable difference of opinion. de Rudder[6] feels that the reaction produced by the drug is closely allied to serum sickness and that the success of the drug depends upon the development of a blood alkalosis during its administration with a sudden shift to acidosis at the time of the reaction, the abrupt change having an effect on the central nervous system. Poynton and Schlesinger[5] determined the blood-plasma bicarbonate, and noted a tendency to alkalosis during administration of the drug, but could demonstrate no tendency to acidosis subsequently. On five of my cases, using the colorimetric method of determining pH, I was unable to note any significant variation from a pH value of 7.3. Since nirvanol belongs to the barbituric class of drugs, one might suspect that its

primary action was that of a hypnotic and depressant to the central nervous system. Lenz[8] remarks that in chorea, degenerative changes are found in the system of small ganglion cells of the corpus striatum and the hypothalamic nuclei. He regards these changes as the equivalent of rheumatic nodules, and considers that the chief part in controlling choreic manifestations is due to the narcotic property of the drug, whereby stimuli traveling to the striated large cell system are inhibited. Gottlieb[9] states that nirvanol treatment is not essentially a fever treatment as the rise in temperature is not necessary in order to produce a favorable effect. Even incomplete reactions ofttimes result in improvement or cure. The fever produced is apparently not of central origin since Lesigang[10] showed that antipyrin was without effect in shortening the duration of the fever. This also tends to rule out the possibility of direct stimulation of the heat regulation mechanism by nirvanol. Too, the fever is not entirely dependent upon the rash for as has been mentioned before, cases appear without the rash, and with fever, and vice versa.

It seems that nirvanol acts cumulatively, as was evidenced in my own cases, and those of East[11] in which drowsiness was noted after a few days' administration. Lesigang[10] has used nirvanol in 106 cases of chorea and epilepsy and noted the tendency to drowsiness in most of his cases.

Occasionally, one sees the symptom complex present in "nirvanol sickness" after the administration of other drugs, but nirvanol seems to possess the property of more frequently eliciting such a reaction than any other drug. Rarely, according to Lesigang,[10] in an incidence of one per hundred, one may see the occurrence of an exanthem after one or two doses of the drug. Such cases, of course, appear to be a true drug idiosyncrasy. One may assume that since the vast majority of cases do not react to a single dose of the drug, and since the appearance of the reaction occurs in a fairly fixed manner after a number of doses, that the body tissues have become altered in such a way that instead of simple narcotic action, a modified effect occurs; in reality, an active sensitization of the body to nirvanol. This idea is further enhanced by the fact that in three cases in which a nirvanol reaction had occurred and subsided, the subsequent administration of the drug about a week later produced "nirvanol sickness." This can hardly have been a cumulative effect although no definite studies are known concerning the excretion rate of nirvanol.

Nirvanol does not seem to depress the circulation or respiratory system or have any irritating effect on the kidneys nor does it appear to aggravate any existing cardiac lesion.

As regards the unfavorable symptoms or reactions occasionally associated with the use of this drug, it can be said that unfavorable results occur very seldom, but the fact that untoward reactions have occurred makes it necessary for the attending physician to be forearmed. In general, the complications in children are not present, and I am not aware of any fatalities in children although when the drug was first employed, it was used in adults and perhaps carelessly so, before its limitations and dangers were known and a few fatalities are recorded. Leichtentritt[12] and his co-workers have produced a marked leucopenia in rabbits with intensive doses of phenylethylhydantoin, but with the previously recommended examination of the blood and with prompt discontinuance of the drug's administration when fever, rash, pulse rise, or elapsed time of fourteen days has occurred, there is certainly no likelihood of an unfavorable reaction occurring.

Majerus[13] has reported a fatal case of acute hemorrhagic nephritis which he ascribed to nirvanol, but this patient had had a streptoccal empyema of four weeks duration. Leichtentritt[12] Lensfeld,[12] and Silberg[12] state that a secondary reaction may occasionally occur weeks after treatment, but recovery ensued.

Pilcher and Gerstenberger[2] have noted pulmonary disturbances from the drug, but no fatalities. They report fifteen cases, two of which developed a low grade pulmonary condition which was thought to be due to an inflammation in the bronchial tree resultant from the drug and analagous to the exanthem. Such a condition rapidly cleared up.

Goebel[14] feels that the drug may lead to extreme injury to the bone marrow, producing a clinical picture similar to agranulocytosis.

In contradistinction to the above possible unfavorable reactions, one must consider the

good results in the cases of various observers with no ill effects. For instance Marick[3] in treating twenty-three cases of mild to moderate chorea failed to develop a fever and rash in about one third of his cases, but noticed an improvement in most all cases and hospitalization was about four weeks. He considers hospitalization as not absolutely necessary during treatment. Huber[15] reported twenty cases, eighteen definitely improved. Lesigang[10] reported thirty-one cases, most of which were definitely improved. Gottlieb[9] had good results in fourteen out of seventeen cases observing a transitory hemorrhagic cystitis as a complication occurring in one case. Lengsfeld[16] in a report of thirty-five cases treated at the University Children's Clinic at Breslau states that twenty-three children were completely cured two and one half years after treatment while eleven cases showed recurrences. Tisdall[17] records twenty-nine cases treated with nirvanol, eleven of which were my original cases. Fifteen of the twenty-nine cases were considered cured in less than six weeks, while nine were markedly improved. Six of the fifteen cases or 40% were said to be relapsed within six months. He concluded that the use of nirvanol as a permanent cure of chorea seemed to be disappointing, but that the results were quite encouraging in the acute cases. It is a well known characteristic for chorea to recur and no figures are available to indicate that nirvanol hastens the recurrence. Ray and Cunningham[1] report that in cases receiving nirvanol the mean duration of chorea was thirty-one days; while in those receiving other means of therapy, the duration was one hundred fifteen days. Keller[18] treated nine patients and remarked that nirvanol stops the symptoms, and that even incomplete reactions result in improvement or cure. Concerning my own sixteen cases, I was able to induce "nirvanol sickness" as evidenced by the fever and rash, one or both, in all but two cases. These two cases however, did show blood eosinophilia which I took as an indication of a reaction. In all of these cases there was a marked lessening observed of the active chorea within the first week after the reaction, and in all cases there was no active chorea one month later. Three cases were of marked severity as evidenced by their being unable to feed themselves, emotional instability with marked speech defects, and body injuries from the movements. These three mentioned cases had had numerous recurrent attacks of chorea and had been in several hospitals. Eight of the cases showed marked movements, and inability to feed themselves, but no bodily injuries. The remaining cases were those of mild to moderate degrees of movements, but able to feed themselves. Only three cases showed a cardiac abnormality which seemed not to be influenced by the drug. It is evident from this brief summary of cases which I personally observed that there was a marked shortening of the active stage of the chorea with a coincident shortened hospitalization without any unpleasant reactions.

The point naturally arises in discussion of this type as to what the effect of this drug may be on the prevention or relapses of chorea or its use in preventing rheumatic cardiac disease. As previously mentioned, Lengsfeld[16] states that 30% of his cases showed recurrences within two and a half years; while Tisdall reports 40% as relapsed within six months.

Concerning the effect of the drug on the existing cardiac lesions which are often present, there are no available reports of any ill effects on the cardiac state occurring from its use. In fact, several authors feel that beneficial effects on an accompanying carditis may oftimes occur. This is extremely important, if true, since Poynton[5] states that in two hundred twenty cases coming to the hospital with chorea, obvious heart disease existed in one hundred twenty-two of the cases. Schlesinger[20] is of the opinion that nirvanol has a beneficial effect on the disappearance of the rheumatic nodules, and he reports a case of acute rheumatic chorea in a boy, age 7½ years, who showed numerous large and painful nodules, fever, and tachycardia and mitral stenosis. After ten days of nirvanol, the reaction had occurred, the chorea disappeared, temperature and pulse rate dropped to normal, and the nodules rapidly diminished in size and number. There was a subsequent attack of acute tonsillitis with a return of symptoms, and a second course of nirvanol again had a similar effect to that which resulted after the first course. I am unable to find other observers who have confirmed Schlesinger's ideas on the disappearance of the nodules after nirvanol treatment.

If such can be further definitely proven and demonstrated then perhaps a true idea of the curative effect of the drug in chorea will be evidenced; namely, its effect in destroying the rheumatic nodules which Lenz[20] describes as existing in the ganglion cells of the globus striatum and the hypothalamic nuclei in cases of chorea.

In the foregoing paragraphs, I have tried to present a concise description of the use of phenylethylhydantoin or nirvanol, and to convey some idea of its wide-spread use, particularly in Europe. Even though there are certain rare ill effects which result from the use of this drug, it seems at present that perhaps it offers the best, from a therapeutic standpoint, in the treatment of chorea in children as evidenced by the almost dramatic effects which frequently occur in cases in which other means have failed. There is a definite shortening of the hospital stay of these patients. There seems to be no greater tendency to relapse in patients who have had nirvanol than in those who have had some other form of therapy. In several of my cases and in many of those reported in the literature, it was used when other measures had utterly failed, and produced good results. If the ordinary hospital routine examination of blood count and urine examination are carried out and a close watch made by the physician in charge for the appearance of any of the triad of "nirvanol sickness" at which time the drug must be stopped, then I see no chance for an element of danger to enter into the treatment by this method. In all fairness, it must be said that the definite mechanism whereby this drug asserts its effect is not settled. Sir Archibald Garrod has said that one can cure chorea in six weeks with any drug provided that one give it in doses that are toxic, and too, we all realize the marked variability in intensity and duration and symptoms in this more or less self-limited disease, which naturally brings up the question of whether or not one is justified in using a drug which has potential danger. I have tried to show that the effect of nirvanol is rarely if ever alarming provided ordinary precautions are carried out in each case. Certainly, I feel from my own meager experience of sixteen cases treated with this drug that the results obtained have justified its use. Nowhere in the literature do I find the suggestion that it should not be used in severe cases, although several authors suggest that perhaps the mild and moderate cases should be treated by some other means. Even though reports show that the best results are obtained in the most severe cases, I see that as no reason why we should not use this drug in cases of any degree. It is a well known fact that the acute cases of chorea recover more rapidly than those which are never very severe, and since mitral disease is apt to develop in these recurrent or low grade cases, I feel that the use of nirvanol should not be withheld. Undoubtedly, the justification of the use of this drug rests upon the fact that by the abolition of the chorea, we may be able to prevent the onset of a carditis. To date there are no figures except the work of Schlesinger that so indicate that the rheumatic infection is specifically affected. However, the clinical results of any form of treatment should be our measure in determining the efficacy of that treatment, realizing that the first law of therapeutics should entail doing only those things which will do no harm to the patient.

There is another form of therapy recently advanced by Lucy Porter Sutton[21] when she reported twenty-four cases of chorea minor treated by means of intravenous injections of paratyphoid vaccine to produce fever. She considers that this treatment is much more satisfactory than any other used at the Bellevue Hospital. Her decision to investigate this type of therapy is interesting in that she observed a case of marked chorea treated by luminal which developed a generalized rash and fever under the drug, the pyrexia existing for several days. Strangely the chorea began to improve and continued to do so. She became concerned with whether the fever was the factor that brought about the improvement in this case and whether it might not be the factor of paramount importance in cases treated with nirvanol. Starting with the initial dosage of 0.1 to 0.2 cc. of ordinary TAB intravenously daily for about a week depending upon the reaction, there was a dimunition in the chorea. In comparing the TAB cases with sixty-three cases not treated except by rest and other medicine, the average stay in the hospital of the sixty-three cases was forty-seven days varying, of

course, with the degree of their chorea. In the TAB cases, the average duration was nine days. Even though it is well known that the average case of chorea will improve in about eight to ten weeks without any specific treatment, it seems advisable to use some form of therapy which can reduce this prolonged hospital stage and in Dr. Sutton's cases the average patient is ready for discharge in about three weeks after admission.

Phenylethylhydantoin has not been used on the children's medical service at Bellevue Hospital because of Dr. Sutton's desire to investigate the forms of fever therapy. She suggests in her article that the main benefit from nirvanol seems to lie largely in the fever produced. As mentioned before, though the most striking results seem to occur in those cases which develop fever, many cases have been reported which make a good clinical response without any evidence of fever. Certainly, the narcotic effect of a drug of this type cannot be totally dismissed. If in the production of fever lies the power of nirvanol to assert its beneficial effect in chorea (I do not feel that this is the essential action of nirvanol), then it is quite evident that other modes of therapy whereby fever may be produced, such as the giving of TAB vaccine would perhaps be superior, since there would be no need to wait seven to fourteen days for the reaction and the likelihood of producing a fever with the TAB would be greater than in the use of phenylethylhydantoin. Until further studies are made as to whether or not nirvanol is a specific anti-rheumatic, it will be difficult to determine the real value of these aids in treatment.

In summary:

1. The two outstanding threapeutic procedures in vogue today for the treatment of chorea minor, namely, phenylethylhydantoin and the production of fever by paratyphoid vaccine are discussed.

2. In properly controlled cases without evidences of existing complications, there seems to be no danger from the use of nirvanol in the treatment of chorea minor in childhood.

3. Suggestive evidence is appearing that nirvanol may be of definite anti-rheumatic value. Certainly, its effects in shortening the duration of chorea is not solely the effect of the induction of fever.

4. By the use of phenylethylhydantoin and the shortening of the active stage of chorea, the incidence of subsequent carditis may be lessened.

5. Phenylethylhydantoin offers a valuable aid in therapy, particularly in the more severe cases of chorea, although there is no definite reason why it may not be used in even the mildest cases.

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DISCUSSION

Dr. Gerald M. Cline, Bloomington: I think that Dr. Whitaker has brought us a very timely subject. We all know that chorea has been a disease with which we have had plenty of trouble, and particularly with its recurrences.

In the literature and also in our own experiences we know of many different modes of treatment. Nirvanol, as he told us, is not generally used in the United States. It had its beginning in Europe, and as far as we can tell, even today there are not very many men using it in this country. I think that he has covered this subject very well.

There are a few points worthy of mention that we might meet in private practice. For one thing, it will produce a rash on the child. So often the parents become quite excited over rashes. It is hard enough sometimes to sell the parent on the fact that she has a long time ahead of her to get her child well; and if we are going to produce a rash, a fever, and alarming symptoms, I believe that that is going to be one of our contraindications.

Another thing that he brought out is hospitalization. Certainly from what Dr. Whitaker has told us and from what I can gather in the literature, it is seemingly much safer to have these cases in the hospital where we can watch them very carefully, and there again sell the parent on the idea of what the child has to go through.

The complications, as he told you, are still debatable.

Some men get good results with no complications; other men have reported complications. The fact that the disease produces this peculiar triad and also the fact that we have the changes in the blood system, is somewhat debatable. Almost all men who have reported on it report on the eosinophilia and the leukopenia, and yet I know of cases where there has been a leukocytosis and no eosinophilia and other cases where there has been an eosinophilia and no leukocytosis. In cases, with such a peculiar blood picture as this, we would have some trouble to know just when our reaction is beginning.

As Dr. Whitaker has stated to you, some of the German men have given us quite a fear, I think, as to the safety of this drug. In fact, we know that it does produce changes in the bone marrow in rabbits and it does produce in a great many cases a leukemia. They have made the statement, as he has told you, that it is perhaps much safer to quit between the 12 and 14 day with the drug, regardless of what the blood picture reaction shows, because we do not know what changes we might produce in the bone marrow.

I also ran across a condition that some men have reported, and that is a secondary reaction as high as 39 days after the first reaction; and secondary reactions, of course, have sometimes been recorded to be just as severe as the primary ones.

I do feel that we are fortunate to have this paper presented to us, because it opens up a new field for us to try. It is going to take perseverance and a lot of selling of our patients, hospitalization, and a lot of hard work to get results with it; but if it will do what so many men have reported, without causing troubles in the way of heart and kidney complications, certainly we have a drug added to the field of therapy of chorea that is worth while.

Dr. Walter M. Whitaker, Quincy: I had hoped that there would be some discussion and that you men would not confine your remarks solely to the use of nirvanol, because I think, as Dr. Cline has properly said, the drug has been used very little. In fact, in this country I can find only three doctors, aside from myself, who have reported in journals, on this subject. You can pick up almost any German publication on pediatrics and find an article on nirvanol in the treatment of chorea.

Dr. Cline has brought up something that I have not had any difficulty with and have not thought about—namely, the fact that you have to sell this form of treatment to the parents, or that anything which may produce a rash or fever in a child may be alarming. I have had no difficulty in private practice with that. I must say that most patients in whose treatment I have used nirvanol have been ward cases in hospital practice; but in private cases I have had no difficulty in explaining to mothers what we hope to accomplish by the use of this drug.

Certainly, I wish to impress again that the careful observation of these cases—not any more critical, I think, than anyone would observe a chorea case unsolicited—will keep one from the misuse of this drug.

Of course, I do feel the necessity of hospitalization. I have never treated any cases in the home. I feel perhaps that it is safer to have the child in the hospital. In private practice I think that many people would prefer that a child with chorea be in the hospital and away from the rest of the family, anyway. I think that that is an important point.

In regard to eosinophilia, as to whether or not it is always present and whether or not it can be taken as a sole indication of the reaction, as previously mentioned in my own experience, practically 75% of my cases showed an eosinophilia of 6 to 12% at the height of the reaction. You must not place too much reliance on an eosinophilia. Berger has reported forty cases showing an eosinophilia to the extent of 7.6% without any particular treatment. In two of my cases, an eosinophilia was the only evidence of a reaction. In regard to bone marrow changes, I believe that Goebel has reported these; in his case there was a severe leukopenia following this rash. The lowest blood count that I have observed was 4,800.

Concerning the secondary reactions which rarely occur and have been reported 39 days after the reaction, Leichtentritt goes so far as to say that exposure of these patients to sunlight within a few days after the reaction will ofttimes produce a reappearance of the rash. I tried that in three or four cases and I was not able to notice any recurrence of the rash. As Dr. Cline mentioned, even though the rash did reoccur there were no ill effects and the child recovered.

In summary, I feel that in presenting this paper one must realize that the nirvanol treatment of chorea is certainly not accepted as a world-wide, rational form of therapy. Schlesinger, in presenting this subject at the British Pediatrical convention in 1929, was very cautious about any rash claims of cure but in the succeeding elapsed years, he has remained an ardent advocate of such therapy. He is the man who now believes that he has definitely seen cases where endocarditis disappeared, as well as chorea, following the use of this drug.

Certainly, those things will only influence me to be eager to investigate the use of this drug; and I hope that some of you, particularly in your severe cases of chorea, will have occasion to try it.

HELIOTHERAPY AND PERIPHERAL BLOOD

G. Hoeffel and D. Lyons, Chicago, are of the opinion that there is no justification for the belief that light rays, considered either collectively as including the entire spectrum or individually as ultraviolet rays, have any specific effect on the blood. The effect of light on the healing of a pathologic process, such as tuberculosis, cannot be distinguished from that exerted by other factors, the beneficial influences of which are well recognized.

Gent: (entering attorney's office) "I want something to quiet my nerves."

Attorney: "But I'm not a doctor, my good man. I'm a lawyer."

Gent: "I know it, I want a divorce."—Film Fun.

XANTHOMATOSIS SCHÜLLER-CHRISTIAN'S DISEASE.*

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Recent contributions to the literature testify to the increasing interest in the condition known as Schüller-Christian's disease or Xanthomatosis. Sosman[1] brings the total reported cases to forty-five. As he points out, probably many cases are recognized and not reported or reported under unrecognized titles; and probably many more are unrecognized.

The purpose of this paper is to report one such additional case with certain pecularities; and to emphasize the early and frequent occurrence of oral lesions, as an important manifestation of this condition.

A review of cases in the following paragraphs shows the freqency of oral lesions and the fact that they are of early occurrence in the course of the disease; not uncommonly they are the initial complaint.

It would seem from the lack of detailed description and the lack of x-ray and histological findings of oral lesions, that not enough attention has been focused on what apparently is a common and early sign of this condition.

Lyon and Meyer[2] have called attention to the frequent and early occurrence of oral manifestations as an important part of the picture of Schüller-Christian's syndrome. They cite ten cases with oral symptoms and summarize the findings as varying from large defects in the maxillae, severe gingivitis, to loosening of the teeth etc.

They stress the conclusion that Schüller's disease should be considered in cases showing chronic disease of gums, or defects (cysts?) in the jaw-bone as demonstrated by roentgen examination and that the diagnosis may be established by histological examination.

Sosman[1a], stated that "one of the most common symptoms and one of the earliest signs is involvement of teeth and gums in children, by an ulcerative inflammatory process classed as gingivitis which results in loosening of the teeth and sometimes the loss of the tooth or teeth involved. This was found to be due to a deposit of the lipoid at the apex of the tooth and a pad of this fat-like material usually comes out with the tooth when it is removed". Sosman[1b] mentions gingivitis as one of the characteristics of Schüller-Christian's disease along with defects of bones, exophthalmos, diabetes insipidus etc.

He comments that the symptoms may be quite variable and that no one of the triad:—bone defects, diabetes insipidus and exophthalmos, are essential to a diagnosis. Nor are gingivitis and stomatitis, which are common early in the disease, always found. He discusses treatment and concludes that only x-ray therapy is of certain value.

He reported three cases—the first one was a male age 55, with no jaw lesions.

His second case occurred in a boy two and one-half years of age with initial symptoms of sore mouth and gums, followed later by polydipsia and polyuria. Examination showed alveolar swellings which were tender and ulcerated. A tooth fell out perched on top of a fat pad. Sections of gingival tissue were reported as acute gingivitis. After x-ray therapy, examination after two years showed an improved condition, but new areas of bone destruction were found in the left mastoid region and in the mandible and maxillae. These areas had received no roentgen treatments. In this case the oral symptoms were the initial complaint.

The third case was a boy four and one-half years of age whose illness started with exophthalmos and cranial lesions. Examination five months later showed carious teeth and several empty sockets. New defects in the skull, pelvis and long bones followed. Two years later examination showed small areas of de struction—one in the mandible, one in the right petrous ridge and one on the edge of an old frontal defect.

Rowland[3a] discussed the etiology of Schüller-Christian's syndrome as related to xanthomatosis and to disturbances of the reticulo-endothelial system. He cited one case of a boy age two with extensive cranial defects and exophthalmos—and stated "the alveolar processes were swollen and tender and most of the teeth were loose and infected, producing a foul odor to the breath. He had already lost a number of teeth, ten having been extracted at one time. The alveolar arches were irregular

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and swollen and bled easily—only three teeth remained. They were the lower incisors and were loose and covered with a tartar-like substance. Tenderness and swelling were present over the maxillae, which added to the fullness of the lower portion of the face".

Citing a second case, Rowland stated that when under two years, this boy's early symptoms were "soreness of the mouth, polydysia and polyuria"; and the mother ascribed the symptoms to teething. At twenty-two months the soreness of the mouth grew worse, and several of the teeth loosened and came out. On physical examination it was found that "the gums were swollen and tender, bled easily and were retracted from the teeth". All the molar teeth in both the upper and the lower jaws were loose. The teeth appeared normal. Pus could be expressed about some of them. X-ray examination showed bone erosion of the right and left parietal bones, temporal and frontal bones and maxillae were also involved. There was erosion of the lateral wall of the left maxilla and clouding of the antrum". No mandibulary x-ray examination is reported.

One year later the patient appeared well. The exophthalmos had receded, the soft spot in the left parietal region had reduced and the sinuses and teeth were in good condition.

Christian's[4] first case was a girl five years of age. She complained of soreness of the mouth around the teeth for two years. She was normal until three years of age, then the teeth began to decay and became loose and her jaws became swollen and tender. No other symptoms were noted. Her mouth continued sore and at three and one-half years her right eye became prominent, and thirst and frequency developed. There was constant pain in the head, bilateral exophthalmos and a progressive increase of symptoms. Examination of the mouth disclosed caries, some teeth missing and a foul breath. The teeth showed poor care and pus around the gums.

In this case mention is made that the dental lesions were the initial complaint occurring one half year before the onset of the other symptoms. No x-ray report or detailed description of the mouth lesions is presented.

Schüller[5] made no mention of dental or oral lesions, in reporting his two cases; although one case did have possible sarcoma of the right upper jaw.

Hand[6] reported two cases, the first with no mention of oral lesions. His second case was a boy of seven, with the history of scarlatina at four followed by a discharge from the right ear. Four months later he had vertigo and pain in the head and enlarged cervical glands. Five months after the attack of scarlatina "the gums began to separate from the teeth, and this was followed by a gradual loss of most of the teeth, beginning with the molars. About the same time, the mother noticed a soft spot on the head, where there seemed to be no bone." At six and one-half years of age exophthalmos appeared, followed in four months by polyuria. The bones of the body except the cranium and lower jaw appeared normal. "The lower jaw had lost its bone salts, and the resultant cartilaginous mass, containing one incisor had been so deformed by the depressor muscles that the chin had disappeared." Here again the unusual oral disturbances occurred early, a considerable time before the onset of exophthalmos and polyuria.

Grosh and Stiffels'[7] case was a girl aged seven. At six years of age, a tooth became infected followed by an infection of the left mastoid, which was opened and drained. Her mouth became sore with a bullous eruption on the gums, which necessitated the removal of some of the unerupted permanent teeth. Polyuria and thirst developed seven weeks after the mastoid drainage. Unilateral exophthalmos was present. The soreness of the gums seemed to vary directly as the amount of sugars and starches ingested. The x-ray report at ten years of age stated "there is a deformity of the lower jaw with abnormal position of the teeth and apical infection of some of the teeth." Striking defects were observed in the right temporal bone, orbit and ilium. Removal of unerupted permanent teeth in a child of six, points to a most unusual mouth condition, which was present seven weeks before the other symptoms developed.

Thompson, Keegan and Dunn[8] reported their case, a boy of nine, as having been normal until fourteen months previously when an attack of measles was followed by looseness of the teeth and soreness of the gums;—fully six months before excessive thirst and urination appeared, followed by a soft spot on the side of the head. Examination showed "the mucous membrane of the mouth was normal but there was a marked

gingivitis. The teeth were clean and sound but loose. Both maxillae showed spotted areas of bone absorption similar to those of the skull (i.e. irregular defects)''. Two years after the onset, examination showed marked progression. The gingivitis was severe, and the teeth were held only by the soft investing tissue, as the alveolar processes had been absorbed. They stress the antecedent infection as an etiological factor.

Denzer's[9] patient, a boy four and one-half years of age had noticed soft tender spots on the head two months after tonsillectomy. Examination showed bad teeth and spongy gums and many soft spots on his head. X-ray examination showed extensive defects in the cranium and maxillae. One year later thirst, polyuria and proptosis developed. As the bone lesions preceded the diabetes insipidus by one year, a pituitary cause of the bone defects is unlikely.

Kyrklund's[10] patient, a girl of twelve, appeared to be of a dystrophia adiposo genitalis type. There were numerous cranial defects and exophthalmos. The teeth were in bad condition, but detailed description was not given.

Bach and Middleton[11] added one case which showed symptoms of diabetes insipidus with marked bony changes of the ribs, vertebrae, head and upper portions of the shafts of the femur and of the pelvic bones. Their case noted no involvement of the oral cavity or jaw bones.

Brauham and Lewis[12], discussing their case of multiple myeloma, emphasized the prominent part that dental illnesses played in the clinical course of this case. This patient had a succession of extractions, frequent trips to the dentist, cellulitis of the jaw, possibly abscessed tooth with some doubt as to the nature of the attack, more extractions and erysipelas. The authors believed some connections between the erysipelas and jaw infections was probable but did not mention any association between the jaw manifestations and the myelomata.

Sophian[13], in describing the clinical history of his case of osteitis fibrosa cystica, mentions that his patient had complete extraction of the teeth at the age of twenty-six. One would assume that some unusual condition of the teeth or jaw was present to necessitate such a radical procedure at that early age but no mention is made of any involvement of the jaw bones in association with the osteitis fibrosa cystica.

Griffith[14] reported one case, a boy aged nine, with defects in the skull, exophthalmos, diabetes insipidus and cutaneous xanthoma. There were marked irregularities in development of the teeth and the mucous membranes were dry and icteric. No mention was made of gingivitis or oral x-ray findings.

Pickhan and Joel[15] as quoted by Lyon and Meyer, reported a case in a five year old boy who developed chronic oral disease following an attack of whooping cough and enteritis at the age of two. At about three and one-half years of age he gradually developed protrusion of the eyeballs and later the teeth became loose and fell out. X-ray examination disclosed large cyst-like defects in the mandible. Other defects were noted in the cranium and sella. No diabetes insipidus was present. Histological examination of the contents of the defects in the jaw bone showed the yellow fat-like deposits characteristic of Christian's syndrome. A later report of this case by Anders[16] stated that all the teeth were eventually lost, spontaneous fractures of the jaws occurred and diabetes insipidus developed.

Henschen's[17] case in a girl of three showed excessive thirst, enlargement of the liver and spleen and loosening of the teeth resembling gangrenous stomatitis. There was a possibility of mercury poisoning as an etiological factor in his case.

Slauck and Donalies[18] reported a case of osteitis fibrosa in a forty-seven year old man. Diabetes insipidus was present for eight years and exophthalmos for one and one-half years. There was an inability to open the mouth more than one and one-half centimeters, and the teeth were carious.

Case 1. A. F., aged 30 years, white, Russian Jewess; married, separated from husband; housewife, was admitted to the Research and Educational Hospital on the Medical service on November 10, 1930, complaining of great thirst, frequency of urination, loss of weight (twenty-five pounds in one year) and pain on the left side of face and jaw.

One year previously she complained of constant pain on the left side of head and face and for that reason in September, 1929, a tooth had been extracted and shortly thereafter she noticed that she was always thirsty. This became progressively worse and she was drinking great quantities of water. It was necessary for her to get up at night on an average of once an hour to drink.

Starting at the same time i.e. September, 1929, the patient had frequency of urination, and nocturia. It

was necessary to void every hour both day and night. She stated that as soon as she voided urine she immediately felt a great desire to drink more water.

She had had pain in the left side of her face for the same length of time and thought that this was due to the fact that her gums had not healed where the tooth was removed.

A loss of twenty-five pounds had occurred since the onset of her illness because most foods made her "feel very dry" and more thirsty so that she was impelled to drink more water and therefore avoided food.

Inventory by systems added the information that she had frequent and severe headaches on the left side of the head which she thought was an extension of the jaw pain. She had also had a proptosis of the eyeball for about one year.

Her past history revealed only the usual childhood diseases. She had one child aged eleven years and no miscarriages. Her menstrual history began at fourteen and was regular until the onset of her illness since which she has menstruated irregularly at intervals of about two months. Duration was four to five days and no dysmenorrhea. She has been separated from her husband for about eight months. The family history was entirely negative.

Physical examination disclosed proptosis of the left eyeball. No other eye defect was noted. The eye ball protruded but the palpebral fissure was not widened and there was no lid-lag, giving a characteristic "frog-like" or "fish-eyed" appearance rather than the stare seen with the exophthalmos of goiter. Fundus examination by Dr. Hallard Beard revealed no choked disc nor other pathology nor any cause for the proptosis of the left eye and the conclusion was reached that this abnormality was congenital although the patient stated definitely that it was not present before the onset of her illness.

The mouth examination disclosed a deep opening in the alveolar portion of the left side of the mandible at the region of the second molar. There was no drainage from the opening. Although the margins of the opening appeared clean and epithelialized, and no odor or other indication of infection or inflammation could be detected, a probe entered this cavity for a depth of about one centimeter.

Pain and tenderness in this region appeared to be constant. Palpation disclosed softened areas on the surface of the mandible at various places. The gum tissue over these areas appeared normal except for a slight hyperemia. Further examination of the neck, chest, abdomen revealed no abnormalities. Arms and legs showed a roughening of the skin with eruption on left elbow resembling psoriasis.

Blood Count:

Leucocytes	12,800
Erythrocytes	4,560,000
Diff.—Polymorphonuclear neutrophiles	74
Lymphocytes	22
Eosinophiles	1
Large Mononuclears	3
Hemoglobin	10.5 Gms. (Newcomer)

Urinalysis—showed a colorless urine.
Specific gravity 1.002
Acid in reaction
No albumin
No sugar
No casts
Bence—Jones protein—not present on repeated examinations.
Kahn test negative. Blood pressure 130/90, 100/80.

Blood Chemistry:
Sugar—145 to 151 mgs.
N.P.N.—30 mgs.
Blood calcium 11.04 mg. to 12.65
Cholesterol 180 mg.

During her stay in the hospital on regular diet she averaged an intake of fluid of 9,200 cc and an output of 9,400 cc.

Stool examination negative.

X-ray examination revealed no abnormality of the sella turcica which might indicate a pituitary tumor. There was no defect in calcification of the cranium at any time.

The mandible showed a number of areas of rarefaction sharply outlined, and irregularly placed giving an appearance which is most aptly described by the term "moth eaten."

These areas of decalcification were in some cases in contact with tooth roots, in others they were isolated in the body of the mandible. The teeth were all vital as detemined by the electrical current. These defects in the bone did not seem to be surrounded or walled off by any more densely calcified layer of bone tissue.

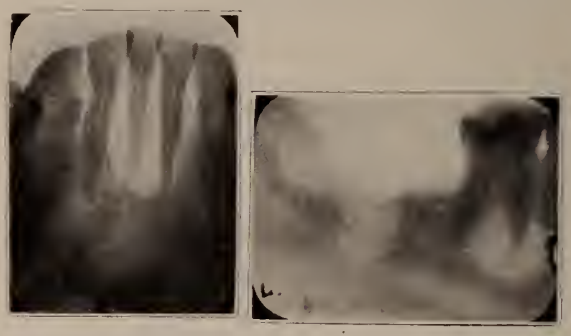


Fig. 1. November 10, 1930. Appearance of lower left molar region and lower incisor region.

Figure 1 shows the x-ray appearance of the left molar region of the mandible which was the site of the first extraction and the region of the patient's greatest pain. It will be seen that here there are four large areas of rarefaction of a cystic appearance—one at the crest of the alveolar process, and just below, one in the body of the mandible lying in relation to the mandibular canal, and one in relation to the mesial root of the first molar. This tooth was vital.

Figure 2 shows three areas of rarefaction—two of those in contact with the roots of the left lateral and central incisors and the third completely surrounded by normal bone tissue.

X-ray examination, November 15, 1931, shows two areas below the lower right third molar and one to the mesial of the first area. The x-rays of the upper teeth disclosed loss of the interproximal septum of bone between the second and third molars on both sides. An incidental finding was the bilateral impaction of both cuspids and retention of the right deciduous cuspid.

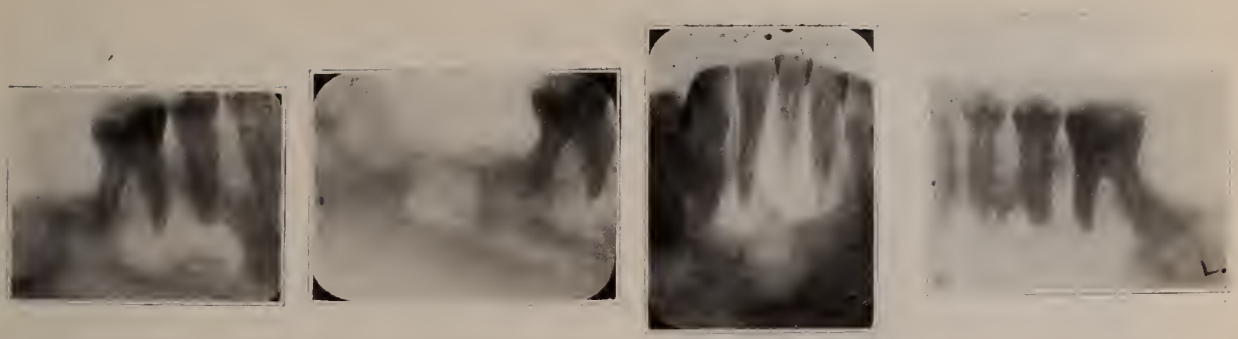


Fig. 2. Same area three months later (Feb. 12, 1931), showing further increase of bony defects.

Three months later, on February 12, 1931, another x-ray examination showed a considerable increase in the size of these decalcifications.

A subsequent examination on May 18, 1931, approximately three months later, again showed a marked



Figs. 3 and 4, May 18, 1931, showing marked increase in size of affected areas.

increase in the affected areas. Here may be noted additional cystic areas below the left cuspid (Fig.3) and right second bicuspid (Fig.4). Note also the extensive loss of alveolar process in the region of the upper right bicuspids. The upper right second and third molars had been extracted.

By this time the loss of bone in the regions of the left lower molar and of the incisors was so marked that no bone could be felt upon palpation or with an exploring probe.

The gum tissue areas over these were quite hyperemic, but showed no swelling nor tenderness nor any exudate, purulent or otherwise. The patient complained of constant pain, however, and additional teeth were removed by various dentists upon the insistence of the patient. These extractions resulted in no relief of the pain. The sockets seemed to remain open indefinitely with no evidence of infection, however. Months after a tooth had been removed, the socket could be found practically as large and as patent as at the time of the extraction.

The skull x-rays as stated showed no abnormality. Examination of the long bones in April, 1931, showed no abnormality.

The patient was treated with extract of posterior pituitary gland and derived considerable relief from the polydypsia and polyuria. The extract was effective only by hypodermic injection. Nasal instillation gave slight relief and oral administration gave none. One ampule (1cc) of obstetrical pituitary extract posterior, allowed the patient to sleep six hours without voiding and decreased the thirst for twenty-four hours. An attempt was made to continue the administration of pituitary extract every other day but due to the unreliability of the patient, treatment was desultory.

The patient was kept fairly comfortable with a dose of pituitary extract posterior twice a week, but as seen from x-rays no improvement was evident in the bone disease.

In August, 1931, the patient complained of constant pain in the right leg above the knee. This became progressively more severe. X-ray examination in October and December 1, 1931, revealed numerous rarefied areas in the lower end of the right femur. (Fig. 5) It will be recalled that a previous examination of the long bones in April, 1931, three months earlier, had disclosed no pathology.



Fig. 5. Numerous areas of decalcification in right femur. (Dec. 1, 1931) Previous x-ray examination of this area in April, 1931, had revealed no pathology.



Fig. 6. October 22, 1931. Right mandible showing extensive defects.

The jaws and teeth appeared practically the same as noted in the previous examinations (Fig. 6). Microscopic examination of scrapings from one of these rarefied areas in the mandible yielded the following pathological report:

"In sections made from the scrapings submitted for examination, the tissue is seen to be composed of young granulation tissue densely infiltrated by lymphocytes and macrophages. There are no evidences of tumor tissue noted.

"Diagnosis—Chronic nonspecific inflammation."

Roentgen therapy was tried on the right femur with resulting relief of pain and discomfort. X-ray examination subsequently, March 11, 1932, (Fig. 7) showed a



Fig. 7. October 22, 1931. Left mandible showing marked defects.

slight decrease in the size and intensity of the rarefied areas, but showed similar extensive defects developing in the left femur which had not received any x-ray therapy.

The patient was hard to control and would not keep appointments for treatment regularly. She left our care and entered Cook County Hospital in June, 1932. Without knowing the previous findings, a diagnosis was made there of diabetes insipidus, extensive pyorrhea, and chronic arthritis of both knees. She was treated with salicylates and gonorrheal vaccine intravenously.

Several days later, she was seen by their oral surgery department, which reported "no pyorrhea", but infected necrotic bone cavities in the mandible.

Their x-ray examination disclosed cystic degeneration of the mandible and both femora. The skull and sella were negative.

Urine examination was negative. The daily output was 8,500 cc.

Microscopic examination of tissue from the mandible showed inflammatory granulation tissue. The patient was referred to the medical service and a diagnosis of Schüller-Christian's disease (Xanthomatosis) was made.

Comment: This case, then, is that of a female patient, aged thirty, with symptoms of constant pain in the jaws and loosening of the teeth, diabetes insipidus and unilateral proptosis; and findings of multiple defects in the mandible occurring fully two years before similar defects appeared in the femora.

A constancy of pain was present which seems characteristic as noted by Bach and Middleton.[11] .

Histological examination was suggestive but not characteristic, but the picture may have been distorted by inflammatory changes. Rothmein[19] has called attention to the fact that the pathological report must be considered with reservations. In his case, the pathological diagnosis varied with the pathologist from "tuberculosis granulation tissue," and low grade inflammation to "multiple infectious lesions."

The difficulty of recognizing the oral lesions is illustrated in this case. The first diagnosis was that of dental abscess and our first x-ray report was "apical abscesses." Several physicians and dentists have seen the case and have made various diagnoses such as pyorrhea, stomatitis, gingivitis, neuralgia,osteitis cystica, dentigerous cyst, syphilis, neoplasm, osteomyelitis and multiple myeloma.

Differentiation from the commoner conditions of stomatitis, gingivitis and periodontitis (pyorrhea) should not be difficult if a thorough oral examination is made. Stomatitis presents ulcerations, necrosis of the soft tissues and evident inflammatory changes, which were not found in our case.

Gingivitis is characterized by swelling, con-

gestion and bleeding around the necks of the teeth.

Pyorrhea is characterized by a loss of attachment of the soft tissues which join the roots to the gums and sockets. There is usually a purulent exudate in the space or pockets thus formed. Our case showed no such changes.

The fact that the rarefied areas in xanthomatosis were not in relation to root ends, that they were not circumscribed by any denser area of bone and that no swelling, purulent exudate, odor or glandular enlargement was present, helps to differentiate from apical abscess, cystic conditions and myelomata.

Surgical procedures—extractions, curettement and drainage—left a clean defect but with no improvement.

Treatment with pituitary extract posterior gave temporary relief from the frequency and polydipsia.

Roentgen therapy gave relief from pain and caused an apparent improvement in the bone defect; but defects appeared in other untreated areas in the opposite femur.

It was hoped that anterior pituitary extract might be tried to observe the effect in the bone lesions, but the patient would not submit to additional injections. It is urged that this be tried, as it seems possible that anterior pituitary extract has a greater influence on bone calcification than the posterior pituitary extract.

Summary

1. A review of previously reported cases of Schüller-Christian's disease indicates that dental and oral lesions and jaw bone involvements are frequent and usually very early manifestations. They often are the initial complaint and often precede other symptoms by a considerable length of time.

2. A case is added with the characteristic features of: oral lesions, bone defects, diabetes insipidus and proptosis; and having the peculiarities of:—early marked bone defects in the mandible occurring two years before defects occurred in other bones; and a rather late age of onset at twenty-nine years.

3. Emphasis is placed upon the advisability of a thorough study of jaw lesions as a means of identification and early recognition. Schüller-Christian's disease should be considered in cases of stomatitis, loosening of the teeth and bone rarefaction of unusual character; and on the other hand, oral lesions should be looked for in cases showing diabetes insipidus, proptosis and other bone defects especially those of the skull. Attention is called to the constancy of pain as a symptom of the bone disturbance.

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TWILIGHT SLEEP

Q.: "What is the first thing you would say to a Twilight baby?"

A.: "Does your mother know you're out?"

CURETTAGE

First Physician—"Do you know Mrs. Blank?"

Second Physician—"Yes—I had a scraping acquaintance with her."

PURPURA HEMORRHAGICA OF THE SCHOENLEIN-HENOCH TYPE*

(Report of a Case).

J. Sheldon Clark, M. D.

FREEPORT, ILL.

My attention to the literature upon this subject was incited by this experience in May and June, 1930. I was called in consultation to see this patient because of the severe inflammatory reaction in both eyes, which had then existed for six days before her entrance into the hospital.

There are so many manifestations of purpuric disease that one hesitates in a given case to be certain of his classification. Osler speaks of the many characteristic lesions of the skin in cases of purpura: all varieties of purpura; wheals and edemas; erythema with or without swelling; necrotic areas due to localized infiltration of the skin. Where there are joint symptoms the most common joints to be affected are the ankle and knee, and the pain can be most excruciating. Involvement of the kidney is often quite serious, and in the case here reported, was accompanied by an anuria lasting for several hours, so that life was despaired of by reason of this complication, the patient becoming quite drowsy and for a time unconscious.

Only a single blood examination was made which showed the following: hemoglobin 80 per cent.; erythrocytes 4,720,000; leucocytes 16,000; red blood cells normal as to shape and size; blood platelets were normal. A blood Kahn test was negative.

In a historic review by Goldstein[1] I glean the following: He ascribes to Willan[2] (1808) the description of a case of purpura occuring in a woman 36 years of age, who ran a course of abdominal colic, vomiting, a bloody diarrhea, painful and swollen joints, and skin lesions such as purpura, urticarial wheals and angioneurotic edema. To Schoenlein[3] goes the credit for describing and giving due importance to joint symptoms in cases of purpura characterized by painful, tender and swollen joints. In 1874, Henoch[4] reported four cases of purpura, and in addition to joint pains described by Schoenlein and the purpura, he mentions other symptoms, such as vomiting, colic, and later observes that there is an accompanying nephritis with hematuria. This brings the disease to about the place it is known at the present time.

Others are of the belief that the purpura simplex, the rheumatic type and those with generalized hemorrhage, are simply varying degrees of intensity rather than being clinical entities. Variations in the bleeding time have been noted, some finding it normal while others note an increase in the bleeding time. It was normal in our case.

As to differential diagnosis, Goldstein quotes Frank, Glanzman Pfandler and von Seht as to the differentiation of Schoenlein-Henoch's purpura from purpura hemorrhagica, both from the blood and clinical aspects, and gives the following table:

	SCHONLEIN-HENOCH	PURPURA HEMORRHAGICA
Constitutional symptoms	Malaise, headache, anorexia, coated tongue, fever.	Few; no fever unless secondarily as result of complicating infection or profound anemia.
Special features	Urticaria, erythema, edema, joint pains and swelling; abdominal colic, vomiting, melena, hemorrhagic nephritis.	Absent; Melena without colic and hematuria without nephritis do occur.
Skin lesions	Petechia, purpura, urticaria, erythema.	Ecchymosis, extensive suggillations, purpura.
Localization	Extremities preferred, especially near joints; head usually spared.	Irregular, frequently on head.
Mucous membrane hemorrhages	Moderate bleeding from gastrointestinal tract, otherwise rare.	Frequent epistaxis, stomatorrhea; uterine, vesical, gastrointestinal and renal bleeding may be extensive.
Bleeding time	Normal.	Increased.
Clotting time	Normal.	Normal.
Clot	Retractile.	Non-retractile.
Morphology of blood	Slight leukocytosis; occasional eosinophilia.	Tendency to leukopenia and relative lymphocytosis.
Platelets	Generally normal, may be increased or moderately diminished.	Marked thrombopenia with giant forms.
Tourniquet test	Positive	Very strongly positive with large ecchymosis.

Case report: Mrs. A. B., 62 years of age, was seen at the Deaconess Hospital, May 26, 1930. Before being admitted to the hospital, this patient had been ill for a period of six days. I saw her in consultation on her first hospital day and where she remained until July 7, 1930. She complained of excruciating pain in both her eyes as well as severe pain in her arms, hands, legs and feet. There was a deep beefy-red injection of the sclerae of both eyes, which had become affected simultaneously. A general uveitis seemed to be present. There was a plastic iritis with plastic exudates and some blood in the anterior chambers. A severe keratitis was also present, and the cornea of each eye had a dirty-gray appearance. The iris was bound down in each eye and could not be affected with heroic use of

*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Society, Springfield, May 18, 1932.

atropine used in solution, then in ointment and finally in powder form. At no time could the fundus be seen with any degree of satisfaction. The eyes were extremely painful. There was a much swollen condition of the extremities, which were covered with large areas of a port-wine or red-plush-upholstering color; many of these areas later broke down and became necrotic in character, with large sloughs occurring, which added to the difficulty in caring for the patient. There was a sensation of heaviness in the hands, feet, legs and arms. The patient remarked that she had been suffering from pain in the feet and ankles, accompanied by swelling, extending over a period of a year or more. Now the pain was of an excruciating character and even the slightest movement was extremely painful.

In a fairly active practice of twenty-five years, together with a residence in one of the larger special hospitals of our country and several months spent in observation of the clinics of the old world, it had never been my opportunity of seeing a case of this description, and I bring it to you as something of clinical interest.

Family history; the mother died of angina pectoris at 79 years of age; the father died at 81 of a paralytic stroke. Several brothers and sisters are robust and living. The patient stated that seventeen years ago she had an attack of neuritis affecting mostly the muscles of the neck and back, also the legs and feet; the limbs, feet and hands were swollen. This attack lasted between two and three years, during which time she had to use crutches. There was great weakness of the ankles and they would not bear her weight (about 200 pounds). She then walked with a cane for a year or so longer. For the next fourteen years she was greatly troubled with neuritis and could usually foretell oncoming stormy weather.

In 1916 "radium solution" was used in the veins on four different occasions. On May 21, 1930, the present illness began with a chill, and was diagnosed as "summer flu." There was a temperature of 102. She entered the hospital on May 26; was moderately delirious, and had a great deal of pain in the eyes, of which much complaint was made. Previous to entering the hospital she noticed that she could see very imperfectly and complained that everything looked like a fern leaf, and that the faces of her friends had a calico-like appearance. On May 24 blotches appeared on the dorsal surface of the feet, hands, legs, buttocks, forearms and shoulders.

Physical examination: a rather large obese woman, whose tonsils were large and gave evidence of past infection, but were not acutely inflamed. There were many purpuric areas on the skin of the feet, legs, thighs, buttocks, fingers, the back of hands and forearms. The face, chest and abdomen were singularly free from purpuric blotches. The feet and hands were swollen and the joints were extremely tender and painful; movement caused excruciating pain.

The woman had been treated for a week or more in the country and when I first saw her she had severe pain in the eyes with a severe iritis and keratitis, and the posterior surface of the cornea was covered with a grayish, creamy exudate that occurred in streaks. Besides the exudates in the anterior chamber of both eyes there were some streaks of hemorrhage. The iris of each eye was fixed and could not be dilated, although atropine was used most vigorously with the hope of securing mydriasis, but to no purpose.

Benedict[5] states: "The ocular signs of purpura are few. Rarely the lids are the seat of hemorrhagic deposits, although hemorrhages into the optic nerve and retina have been noted, as well as optic atrophy. Motolece[6] saw bilateral papillitis, with alternating convergent strabismus, from rheumatoid exanthematous purpura. The patient was a child three years of age. The day after the onset of febrile symptoms purpuric patches appeared on the skin of the abdomen and limbs and convergent strabismus developed. In one eye hemorrhages were associated with the papillitis." A number of writers speak of having observed small petechiae on the sclera and conjunctiva in cases of purpura. Retinal hemorrhages and conjunctival hemorrhages are frequently mentioned, but no case in the available literature which came to my hands, save one, reported eye symptoms at all commensurate with those observed in this case.

This patient was under observation for a period of forty-three days, during which time the disease rose to its acme, there being great distress in the joints of the hands, feet, knees and thigh. It was almost impossible to turn her, and in spite of vigorous use of salicylates, foreign protein and symptomatic treatment the condition seemed to go on to its own termination, a gradual restitution taking place.

In March, 1931, I removed the patient's right eye on account of persistent pain and continued degeneration taking place in the eyes, to the point of lack of either light perception or projection in either eye. She is now quite happy in her work of basket weaving, for which she has to thank the Illinois State Board of Health and its work of teaching the blind some form of occupation, without which life would be unbearable.

The eye specimen was sent to Dr. Sanford Gifford, Professor of Ophthalmology at Northwestern University Medical School, whose report is as follows: "The iris ciliary body and choroid all show a marked congestion. The veins are full of blood and there is round cell infiltration about a number of veins in the iris; some diffuse round cell infiltration in the iris stroma; some blood cells free in the uveal stroma, but no large hemorrhages are seen in the section examined. The choroidal

arteries show marked thickening of their walls. In the ciliary body is a large focus of round cell infiltration with a number of free red cells. Next to this is some new connective tissue containing thin-walled vessels. Apparently this represents a site of a larger hemorrhage which is being absorbed and replaced by connective tissue. The ciliary processes are edematous and hyperemic. This section is not cut through the pupil so the chamber angle cannot be described. I would appreciate a little more history on this case and we will send you a complete report when our celloidin sections are run through; this is the best we can do in paraffin."

After receiving the above report a second one was sent me by Dr. Gifford which gives the pathology through the anterior segment of the eye and was from a celloidin section. It is as follows:

"This section goes through the pupil and shows that the anterior chamber is almost completely obliterated. The iris is bound to the cornea and the lens capsule by newly formed connective tissue. The chamber angle on one side is completely closed; at the other side the canal of Schlemm is patent and there is a narrow anterior chamber. Just under the iris root at this side is a focus of fresh round cell infiltration. The cornea shows some infiltration near the limbus and edema of the epithelium. The iris is infiltrated with large mono-nuclears and a few polys. The lens shows some newly formed spindle cells under the capsule. The retina is completely detached. The choroid is much congested and shows some round cell infiltration. There is a dense cyclitic membrane behind the lens attached to the retina. There are some small hemorrhages in the ciliary body and the small vessels are much dilated.

"Summary:—The picture is one of chronic iridocyclitis with a secondary glaucoma and retinal detachment due to the formation of cyclitic membranes. There has also been some recent active inflammation. There is nothing distinctive about the picture which suggests a reaction to a blood dyscrasia except the marked congestion of the vessels and hemorrhages which might be present in any severe uveitis. Apparently the uveitis was due to some form of infection or the presence of toxic material in the blood stream."

In November, 1931, I removed the patient's tonsils, which showed evidence of chronic infection; she is of the belief that she feels better since that time.

Comment

There is no history of familial tendency to blood disease obtainable in this case. The most important elements were the acutely swollen and painful joints, purpuric spots on extremities, scapular and buttock regions. There was no tendency to excessive bleeding from the gums, nose or bowels. There was excessive tenderness over the abdomen, some distension, and a tarry appearance to the stools for several days.

This case was characterized predominantly by an arthritis with excessively swollen joints of the feet, hands, arms and legs, with red-plush-looking hemorrhagic areas, some of which developed necrotic spots. There was colic, vomiting, tarry stools, with moderate fever. Within the first twenty-four hours eye symptoms developed, which resulted in intraocular hemorrhage, iritis with dense corneal opacification and loss of vision in both eyes. In the previous attack mentioned which occurred fifteen years previously, there were no eye symptoms.

The patient at present seems well and happy in her work.

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DISCUSSION

Dr. Harry S. Gradle, Chicago: I am not surprised that even in as extensive a practice as we all know Dr. Clark has, he has never seen a similar case.

From a careful survey of the literature, it is my belief that this is the second that has been reported. The first case reported is that of Benedict, and it has been my good fortune to carry out this case to its conclusion. Six or eight years ago a young woman suffering with acute uveitis was seen by Benedict, and the etiological factor in the case was found to be a Schoenlein-Henoch purpura. Despite long continued treatment the cornea finally perforated and an enucleation of the eye became necessary.

About a year ago the other eye became similarly involved and in spite of all efforts at treatment the cornea perforated. I pulled a conjunctival flap over the perforation, and nevertheless, the condition progressed to a phthisis bulbi and today the patient is completely blind.

A second instance of uveitis due to Schoenlein-Henoch purpura occurred in my own practice. This patient, a young girl, fortunately had merely a mild exacerbation of the blood dyscrasia condition, with an accompanying uveitis of moderate degree. In this case the cornea did not become involved and the uveitis yielded promptly to foreign protein therapy.

More than a year has elapsed since that attack, during which time she has been entirely free from all symptoms.

Dr. Alonzo B. Middleton, Pontiac: I should like to ask Dr. Clark whether or not he found the intraocular tension was increased before the eye was removed.

Dr. J. Sheldon Clark, Freeport (closing): I thank Dr.

Gradle for his discussion of this paper. At the time I first saw this case, I knew I had a purpura, but did not recognize it as of the Schoenlein-Henoch type until about two months after finishing with it. I read all the literature I could find, and found that that fall, 1930, Dr. Benedict brought out the report of his case. I had not seen anything of the sort before and did not know of its rarity at this time.

The tension was not taken before removal of the eye, however it felt soft. At the time of the severe uveitis the tension was greatly increased.

THE CRIMES OF COOKING

HENRY T. BYFORD, M.D.
CHICAGO

The accumulation of wealth by fair means or foul has recently led the world to the brink of financial ruin. Reckless speculation and excessive buying and selling on credit by the unenlightened mass in trying to keep up in the mad and merry pace have been prominent features. The remedy proposed by nearly all of our leaders has been and still is, "Open your purse, keep your money in circulation, spend your cash and all will be well," forgetting to add "until the rest of your money is gone." Should they not have said? "Adapt your living to the altered conditions. Forget the old high pressure methods and work your way back to the normal, instead of trying to bolster up the abnormal conditions a trifle longer."

I mention these facts as an appropriate introduction to a criticism of our increasingly complicated, luxurious and injurious habits of eating and drinking. The masses who eat such foods as many of our kitchens, restaurants, bakeries, canning factories and candy stores provide are unwittingly committing errors which, although they act more slowly, act more harmfully and in the end more hopelessly than those due to the ever recurring speculating and spending mania of the financial world.

To begin with the babies: their diet has, under the control of the medical profession, been scientifically planned and generally adopted, and the result has been a great reduction of infant mortality and morbidity. But a similar regulation of the diet of older children and adults has not been accomplished. Young people as a rule eat more than they can utilize, and the same may be said of nearly all hearty eaters. About 66 per cent. of all adults over 40 years of age who are ten pounds overweight show hypertension with an increased mortality rate in proportion to their excess of weight. A balanced reducing diet intelligently supervised is the largest single factor in the control of certain types of hypertension.[1] But it is not so much with quantity that I am concerned as with quality; not so much with single foods, nearly all of which are healthful, as with the combinations of foods as they are served.

The evils of overeating are an old story, but the evils due to the improper preparation of food, although known in a general way, are not well understood by those most concerned, viz., the eaters. The average eater selects from the food he finds prepared for him whatever he likes best. If it does not cause pain or distress within a short time he thinks that it has agreed with him, and does so again, and expects to enjoy a long life. But he awakes some fine morning in middle life or later, and learns that he has diabetes, nephritis, arteriosclerosis, angina pectoris, pernicious anemia or some other incurable ailment.

The foundation for many such diseases was formerly laid in infancy and early childhood; nowadays it is more often laid in later childhood and adolescence.

An illustration of the injurious qualities of our popular food mixtures can be found in a study of the composition and digestion of plain pound cake. The receipt is taken from the "Boston Cook Book" (Miss Ward's receipt).

It is a mixture of a pound each of flour, butter and sugar, with twelve eggs. Enough milk is slowly added to make a moist soft mass, which is stirred with a strong beating motion about two hundred times. Thus the eggs, butter and sugar are evenly distributed through the flour. Then the mass is put in a moderately hot oven for about a half hour with the result that the starch granules are coated over with firmly coagulated albumen and imbedded in the egg fat and butter fat. The starch cannot be acted upon until the mass has been penetrated by the gastric fluids, the fat separated from granules and the albumen liquefied so as to expose the cellulose covering to the action

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1. Annals of Int. Med., Ann Arbor, Mich., Feb. 1932. V. C. Rowland.

of the muriatic acid. All of this means delayed digestion, or indigestion, according to the amount eaten. Hence pathological changes may be expected to ensue. But the disturbed digestion has probably not been painful, and the harmful, incurable pathological results are slow in making themselves apparent.

Wedding cake has the same ingredients plus citron, almonds, raisins, two pounds of currents and two more eggs, and is condimented and conserved by nutmeg, cinnamon, allspice and cloves. Exeepting the sponge cakes which have no butter fat, although plenty of egg fat, all kinds have a similar combination of ingredients in varying proportions, from fruit cake, nut cake, devil's food to angel's food, grandmother's cake ginger cake, and such puddings as plum pudding, suet pudding, fig pudding, cabinet pudding, boiled puddings, etc. Most of the ornamental bakery goods, from sweet rolls, cinnamon rolls, butter rolls, coffee cake to doughnuts and French pastry, are only a degree less complicated and injurious.

I have not much to say about meat, except that when taken in hash, stews, croquettes and other mixtures, the grease is often in such excess as to interfere with the stimulating action of the meat on the secretions of the stomach, and also to interfere with the functions of the secretions. This excess of grease also makes necessary the use of strong condiments. Ordinarily the requisite amount of proteins can be obtained from the dairy products, legumes and cereals. Modern man is omnivorous less for the necessity of eating meat daily than of enabling him to live in climates and seasons where all kinds of food, particularly meat, may not be available. His thirty-two teeth are all grinders and "gnawers," exeept the four blunted remnants called stomach and eye teeth.

What can be done to remedy these established styles of cooking and eating?

We must begin at the bottom and bnild upward. We must quit feeding to our young people so much sweetened and highly flavored food. It gradually destroys their natural appetite for the unmodified flavor of the cereals, vegetables and fruits. Statistics show that the average American eats ten times as much sugar as he did a hundred years ago, and I suppose that as some people do not eat more than half that proportion, others make up by eating about twice that much. Children could get all of the sugar they need in ripe fruit, mature vegetables and in milk. Desserts can be provided with but little artificial sweetening. When the time is unusually long between meals, one or two small pieces of candy, or one or two buttered or slightly sweetened crackers, or a cup of milk, will usually carry them through eomfortably.

When I was a child and was hungry between meals I was given a slice of bread and butter, and I liked it. But my mother died when I was ten years old, and after that I bought bakery sweets, candy, cookies or ice cream or soda water between meals, had become a confirmed dyspeptic at 18 and, for a long time afterwards, had to make use of my professional knowledge and appeal to that of my colleagues to rescue me from the results.

But while cooks and mothers are what they are, what can we do with the food as it is set before us?

1. Never overeat.
2. Reject highly condimented or excessively sweetened foods. Salt is almost the only normal condiment for starchy food.
3. Since slight sweetening of starehy food makes us eat more of it than would otherwise be relished, we should depend upon salt instead.
4. Reject very greasy foods. Fat is too coneentrated to be eaten in large quantities, since sugar has become such an abundant ingredient of our daily food that we do not need as much fatty food.
5. Reject complicated mixtures.

As an illustration of the feasibility of a diet based upon these suggestions, I offer a bill of fare which represents what and how I have eaten for two consecutive years,—and I am still following the plan and relishing my meals. Daily changes were slight and did not affect the nature of the food nor the method of eating.

About an hour before breakfast the juice an orange or ripe lemon or grapefruit, or some tomato juice,—and a glassful of water.

Breakfast:

(Each eourse to be finished before the next one is started.)

1st Course: Cup of half coffee and half hot milk.

2nd Course: Unsweetened breakfast food with evaporated milk. I have usually mixed two parts of puffed wheat with one part of shredded wheat. Sometimes I ate plain oatmeal or popcorn or grapenuts.

3rd Course: Dried, brittle toast or heated wheat muffins or hard rolls or rye rolls, with butter or Philadelphia cream cheese as a spread.

4th Course: Coffee and hot milk, about half and half.

5th Course: Soft or medium boiled egg (irregularly).

6th Course: Fruit.

The division of the meal into so many simple courses is for the purpose of preventing interference of acids, or sweets, or fats or fluids with the mastication of the starchy food. If I used butter it was never allowed to melt on or into the toast or other starchy food.

Midday Meal (Dinner):

1st Course: Soup (without bread or crackers) in cold weather. Vegetable salad in hot weather.

2nd Course: Fresh meat (cooked without an excess of grease) or a protein salad. Boiled, baked or creamed potatoes and two green vegetables cooked without grease.

3rd Course: Dessert,—light puddings, or custard, ice cream, ripe unsweetened fruit in season, crackers and cheese, nuts.

4th Course: After dinner coffee.

Evening Meal (Supper):

1st Course: Either soup or vegetable salad. Both were often served by making a course of each.

2nd Course: Poor man's rice pudding, unsweetened and made with skim-milk, and served with warm evaporated milk as a sauce. The slight taste of milk sugar developed in the pudding and evaporated milk gives a suggestion of sweetness without diminishing the natural flavor of the rice.

3rd Course: Toasted bread or a heated plain white roll, rye roll, or white flour muffin. I used cream cheese as a spread, or a small piece of Emmenthaler cheese when I ate a rye roll. I have usually rejected bread, rolls and muffins made with corn meal, bran or whole wheat flour when I detected the taste of sweetening and shortening.

No sweets are taken with the evening meal.

If I had been in the habit of retiring late and very busy in the middle of the day, I naturally would have taken the dinner in the evening and the light meal in the middle of the day.

Because sweets are stimulating and liable to ferment and cause discomfort, I have attributed my ability to retire early and sleep well largely to the fact that I took nothing sweet, not even fruit, with or after my evening meal nor at bedtime.

There are many kinds of meats, vegetables, farinaceous foods, and light desserts that can be substituted to give variety to this kind of diet without changing its character. Amounts can be increased or decreased according to individual requirements. My regulations were not based upon the kind or value of each food, but upon the *interference* with *digestion* and *assimilation* caused by complicated mixing, cooking and flavoring,—and by faulty eating habits.

Such a general smplification of the diet would put many chefs, restauranteurs, fancy bakers, novelty canners, and street vendors out of business, but it would save our children for a healthier, longer and more vigorous old age. When eating at restaurants the principle can be fairly well carried out by eating only one at a time of the foods or kinds of food served and leaving the mixtures.

However, as few people could or would eat just as I have recommended, I wish to call attention to a method that, although well known, is generally neglected by human beings. We have an illuminating example of it in our barnyards.

The cow can gather and prepare enough raw food material to nourish herself and have an abundance left for our nurseries, hospitals, hotels, canneries, cheese factories, etc. This is made possible by prolonged chewing of the cud or bolus, which insures a perfect first stage of digestion and makes more effective the other steps. But the cow gives to the performance much of her time and all of her attention. She does not believe, as does the educated human being, that an appetizing talk is better for digestion than silent enjoyable chewing.

Fletcher had the right idea about chewing, but he died trying to prove it. He had a perfect precedent in the cow, and also in the horse, but failed to recognize his human limi-

tations and became a martyr instead of a reformer. It may be true that I exaggerate the necessity of mastication, but I feel sure that I do not exaggerate its usefulness.

Let us see what Fletcherism can be made to do to a piece of pound cake. Prolonged chewing can be made to moisten and disintegrate the coagulated mass of albumin, fat and cane sugar, and thus expose the cellulose starch capsule for immediate disintegration in the stomach by the hydrochoric acid. Thus the long delay in the stomach that ordinarily follows the hasty swallowing of pound cake is avoided, and a more complete digestion secured.

Habitual, prolonged Fletcherism activates our more or less atrophic salivary glands and increases their power toward doing for cooked food what chewing the cud does for raw food.

But the immediate outlook for our children with their pennies and nickels is discouraging. Our only hope is to teach young children at home and at school lunches that such things are harmful, and not allow them to buy or eat them.#

One of our greatest needs is a thorough reform of the cook books. They should be revised upon scientific principles. They should contain a preliminary discourse upon the main facts of digestion and how cooking can be made to aid digestion. They should teach something about incompatibility of mixtures, both the cooked and raw. They should teach something about the proper, beneficial use of flavors instead of making a luxurious lure of them.

Baking and canning for public sale should be regulated by law, and a list of the ingredients used be available to all who pay for the goods.

But how can we get any enjoyment out of life if we give up so much time to chewing and so much study to choosing?

Each meal should have time to be eaten. Each cereal, when properly prepared, has a characteristic agreeable flavor, and the same is true not only of ripe fruits but of vegetables, meats, nuts, etc. An hour spent three times a day chewing them should be an anticipated pleasure as well as a comforting assurance of the enjoyment of better health in later life.

We spend over $300,000,000 a year for sweets and the nickel candy bar gets the biggest share.

The idea of making coffee, tea, or other wholesome drink a full course at the beginning, end or, if desirable, in the middle of a meal, is not only to prevent the swallowing of imperfectly masticated food, but to give the table wits a time for their talk. The habit of telling jokes with the mouth full of food is all too common when good fellows eat together.

Breakfast Cereals. Breakfast cereal foods have become popularized by means of cunningly phrased and misleading advertisements until the gullible public would be better off if it had none but the old reliable oatmeal, hominy, popcorn and cornmeal mush of former times. Their greatest improvement consists in the convenience of having them put up ready to serve with or without a little warming.

1. The best breakfast cereals are those to which no fat, sweet or artificial flavor has been added except a minimum of chloride of sodium.

2. The best available test of the digestibility of the foods sold "ready for eating" consists in chewing them dry while the stomach is empty. The best prepared cereals will hydrolize in the mouth the quickest, the particles of the hull remaining for a little more grinding and maceration.

3. Popcorn, which is a rough model for the dry breakfast cereals, is the exploded kernel to which the starch, liberated from its cellulose cover, clings. Upon being chewed dry without butter, the starch is hydrolized almost immediately, leaving the hull to be mashed and macerated by more chewing and then sent to the stomach for quick action of the hydrochloric acid.

4. Neither sweetening nor other artificial flavoring should be added to breakfast cereals by the manufacturer or eater. The characteristic natural flavor of each cereal adds to variety of food and is a guide to the appetite and an aid to digestion. Sweetening not only weakens the natural stimulating flavor of cereals upon the enzyme but it excites an abundant flow of watery secretion that weakens the enzyme action. The place of sweets in a normal diet is at the end of a meal, or between delayed, or too widely separated, meals as a tiding-over stimulant.

First Principles of Eating

1. Moderation, Simplification, Mastication. Moderation favors the development of a re-

curring animal appetite, better called normal hunger. It teaches us *when* to eat.

Simplification separates the kinds of foods and serves them with their natural flavors. It teaches us *what* to eat.

Mastication facilitates digestion by disintegrating and preparing the food for the stomach. It teaches us *how* to eat.

2. Occasional abstinence from a want of appetite is more conductive to a long and vigorous old age than the habit of eating without an appetite for fear of missing or skimping a meal.

3. Chewing one kind of food at a time is the simplest way of preventing a mixing of interfering flavors or of incompatible foods.

4. Choose and chew! When you can't choose, chew! When you can't chew, choose!

5. Excess and error in our eating habits require reform as much as do the disastrous and complicated business methods of recent times. The results of such eating are less sensational and less suicidal, but they shorten our lives none the less.

6. The physician in recommending a diet is too much concerned with the addition and subtraction of calories; the cook is too much concerned with the multiplication and division of flavors; the eater is too unconcerned.

7. Health is more than strength; longevity is more than senility; disease is more than death.

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THE THERAPEUTICS OF SULPHUR

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Sulphur occupies a preeminent place in the materia medica; its healing qualities have been known and appreciated for many hundreds of years. As a matter of fact the beneficial effects of sulphur as found in natural springs, were recognized long before sulphur was put into active form by means of chemophysical processes. Such sulphur springs as Aix, Amelles les Bains, Bagnere de Luchon, Bonne (France); Harkany, Herculesbad, Mehadia and Treplitz-Trencsen, Potyen (Hungary); Ischl, (Austria); and Mount Clemens (Michigan) have established reputations as being highly effective in the treatment of rheumatic and arthritic conditions arising from infective or metabolic causes.

Sulphur is found in intimate association with life. It forms an integral part of all albuminoid molecules. Its presence is necessary to the life of the cell just as are carbon, hydrogen, oxygen or nitrogen. It has been found that the sulphur of the proteid molecule may exist under the form of organic sulphur such as mercaptan or as oxidized sulphur. It has also been found that most protein matter contains its sulphur almost exclusively in the form of cystin or cystein. Sulphur is found in the liver under the form of taurine which is formed by the breaking down of proteins. A combination of taurine and cholalic acid forms one of the biliary salts. Sulphur forms an integral part of oxyhemoglobin in which it exists in a higher proportion than iron. Melanine is a sulphur compound.

Experimental or functional suppression of the suprarenals causes an increase of sulphur in the blood, the increasing concentrating the neutral sulphur most exclusively. Beginning with hydrogen sulphide many transformations occur consisting of more or less complete oxidation. Completely oxidized sulphur is of no value to the organism and can only be eliminated. Hence the presence of cystin, which is unstable, in the albumins is very important. The cystin in the albuminoid molecule appears to be in relation with nutritive phenomena. Sulphur is present in every cell, and in the hydrogen sulphide of the protein building stone, cystin, which is present in most animal proteins, especially in the horn substance. Furthermore, sulphur is present, combined with protein in the ethereal sulphuric acid of chondretin, as in bone cartilage. It is also found in the acid salts of saliva. In cystin sulphur assumes an active part in the intermediary metabolism. Cystin takes on very easily two molecules of hydrogen and forms cystein.

The pharmacological effects of sulphur are connected with the relations of sulphur to hydrogen and oxygen. The formation of hydrogen sulphide is most important, since in this form sulphur is most readily absorbed. In the blood sulphur is partly oxidized to sulphates, and partly eliminated unchanged by the skin and lungs; in the brain the sulphur content appears to be increased after the application of sulphur. In the skin it forms alkali sulphides. Hydrogen sulphide is capable of dissolving elementary sulphur, forming polysulphides (H_2Sx); these polysulphides are resorbed and enter the blood or in the cells, give up the

excess sulphur, which can then in these ways be oxidized or reduced.

As was stated in a previous paragraph, sulphur is one of the oldest drugs at our disposal. It was highly esteemed by the peoples of antiquity. The Greeks termed it theriou, which meant devine. Homer recorded in his poems that sulphur was of great value in overcoming a skin disease with which Heracles was afflicted. In the 16th book of the Iliad it was praised as a deodorizing agent. Similarly, in the Odyssey, it was used to purify the air in the halls of the palace after the suitors of Penelope had been put to the sword.

In Rome the value of sulphur in the use of diseases of the skin was understood. Pliny, Ovid and Virgil spoke of sulphur in the treatment of skin diseases in sheep. When Galen wanted to treat his patients with sulphur he sent them off to Vesuvius to inhale the vapors. Dioscorides and Pliny advocated sulphur in the treatment of bites inflicted by animals. In 1546 Fractorius recommended it in the treatment of syphilis.

Sulphur is perhaps used more widely in diseases of the skin than in any other condition. When sulphur is applied to normal skin it produces an increased but incomplete epidermal keratinization with a definitely marked dilitation and thickening of the vessels of the papillary layer. There is a very slight leucocytosis, particularly of mononuclear cells. The chemical reaction responsible for this phenomenon is explained on the basis of the sodium chloride of the serum, which oxidizes the sulphur to form sulphuric acid. In this way the greater the concentration of sodium chloride in the serum the greater the activity of the sulphur.

Many years ago Unna demonstrated that loosely bound sulphur exists only in cells of the skin having undergone complete cornification. Thus, sulphur applied to the skin in dermatoses in which there is a deficient or incomplete kernatinization, as seborrheic dermatitis, pityriasis rosea, psoriasis, etc. in which parakeratosis is an important factor, should act as a corrective agent. This is called its keratoplastic action which next to its antiparasitic action is the most important property that sulphur possesses.

The chemistry of the keratoplastic action of sulphur can briefly be stated here. It depends upon the ability of hydrogen sulphide to combine with sulphur to form the polysulphides which had been mentioned previously. These further combine with oxygen producing thiosulphates. The organic sulphur compounds found in the epidermis also have a tendency to combine and form sulphur compounds, such as cystein and cystin. This acts as an aid to normal cornification.

Sulphur applied in the form of a powder, a lotion, or an ointment has been used with success in quite a few skin diseases. It has demonstrated its worth in acne vulgaris, scabies, rosacea; in the various pyodermias, boils, carbuncles, furuncles and impetigo contagiosa. In the pus forming skin lesions sulphur acts by withdrawing moisture and oxygen from the tissues in this way rendering conditions less favorable for bacterial growth.

Sulphur has also been used in other skin diseases. Paschkis has used it in ichthyosis and pigmentary diseases, and Stelwagon recommends it in lupus erthyematosus. Shoemaker believes that sulphur is of value in psoriasis and pediculosis. Sabouraud advocated it in affections of the follicles; Crocker claimed good results in localized hyperdrosis with the internal administration of a drachm of precipitated sulphur three times a day. Walker recommended sulphur in erthyema multiforme, and Hardway obtained good results in dystrophies of the nails. Trimble uses sulphur in the form of an ointment in sycosis vulgaris.

In addition to the local application of sulphur ointment, lotion or powder, sulphur baths have been known to exert remarkable effects in skin diseases. The sulphur is absorbed both by the skin and by inhalation. Sulphur baths for syphilis were recommended as long ago as the sixteenth century. Such modern authorities as Julinsberg, Elsner, Emery Landouzy and Desmoulieres are enthusiastic over the results obtained in syphilis from sojourning at sulphur spas.

Within more recent years the internal administration of sulphur for various diseases has been recommended. A prominent application in this direction is the intramuscular injection of sulphur in the treatment of articular disease. This was first used by the French and introduced into Germany by Meyer-Bisch. By this means improvement in many cases of chronic arthritis has been noted. The solubility of sulphur in glycerine or oil and its intramuscular injection has recently become established as a favorite treatment of joint disease. After an injection of 5 to 10 cc of a 1% solution of sulphur there is a considerable increase of excreted sulphur in the urine as

compared with the amount introduced. It has been found that after a sulphur injection the extra-renal water secretion increases considerably at the expense of the renal. In summarizing the metabolic changes which take place after an injection of 5 mg of sulphur we may say the following: The nitrogen excretion is not increased; it even shows a slight diminution. That there is a change in the intermediary protein metabolism is demonstrated by the absolute and relative increase of neutral sulphur excretion. In the urine there appear glycuronic acid and urobilin in greater amounts. These metabolic processes are accompanied by a retention of water and salt which causes a loss of weight and changes in the blood serum and an increase of NaCl within the serum.

Clinically the injection of sulphur presents the same picture as the action of certain protein bodies. This holds good for small as well as large doses. In the latter the general condition is more influenced and the temperature is much higher than, as for example, in the injection of milk. As a rule, after the injection of sulphur, as after the injection of protein bodies, sharp pains appear in the diseased as well as in the healthy joints. As for the local action of the sulphur, there appears after the injection a sort of decomposition of the specific materials of the articular cartilage which is manifested colloid-chemically in the diminished swelling of the cartilaginous tissue. This process demonstrates a transformation of the substances in the joint, in this manner explaining the therapeutic action of the injected sulphur. An examination of the sulphur contents of the blood and exudates after an injection of sulphur demonstrates that there is a fall in the blood and a corresponding increase in the serous cavities.

Maillard and Robin have demonstrated still further that sulphur is therapeutically indicated in chronic muscular and articular rheumatism, and that in these conditions there is a disturbance of the organic molecular harmony through certain loses in the system which the sulphur supplies. Many other investigators have reported good results with sulphur injections in arthritic conditions.

Hayn emphasized the advantages of systematic sulphur treatment in all chronic joint affections that do not yield to the salicylates. Hayn used an intramuscular injection of an emulsion of 1 part of sulphur depuratum and 20 parts of eucalyptol in 80 parts of olive oil. He used this in a series of cases of arthritis deformans. In these cases a chill followed the injection in about twelve hours, with fever, headache and pains in all the joints most affected. These symptoms all subsided within 24 to 48 hours. All his cases showed remarkable improvement.

This property of sulphur when injected to cause a rise in temperature has been taken advantage of therapeutically. In 1927 Schroeder of Denmark reported excellent results following the injection of sulphur in the treatment of paresis by hyperpyrexia. The intramuscular injection of 5 cc of a 2% suspension of sulphur in olive oil was followed in about six hours by a temperature ranging as high as 104°. This began to fall after a while.

The artificial induction of fever as a therapeutic measure in peripheral vascular disease has also been well demonstrated. Waller and Allen reported a series of cases in which they used a 2% solution of sulphur in olive oil. Observations were made on pain at the site of injection, on relief of pain in ulcerated or gangrenous regions, on healing of ulcers, etc. The most satisfactory results were obtained in doses in 1.5 or 2 cc. It has been found that sulphur in olive oil, injected intramuscularly, in the treatment of peripheral vascular disease, is most satisfactory for persons of advanced age, for those who are resistent to treatment by vaccines, and for those in whom the pain from the injection is not excessive.

Another application of intramuscular sulphur therapy has been made by Lasch who found that nonspecific intramuscular treatment with sulphur is beneficial in asthma and gives results in aged patients closely resembling those following specific desensitization. Cases of bronchial asthma, with relatively free intervals, have a much better prognosis than those with permanent dyspnea and paroxysmal exacerbations. Lasch's technic is to inject 2.5% sulphur preparation, obtained by rubbing up precipitate sulphur 0.25 in 100 grams of sterile olive oil. Injections are given twice weekly. The course of treatment consists of ten injections, the first eight of 1 cc.; the last two of 0.75 and 0.5 cc. If five injections show no noticeable improvement, the treatment can be interpreted as hopeless.

When more intense and quicker action is desired sulphur may be injected intravenously. When this is done the following takes place: The sulphur combines immediately with the hydrogen present in the body, hydrates

and sets free an ionized active form of oxygen to react with the body constituents. This occurs according to the formula:

$$S + 2H_2O = H_2S + O_3$$

This oxygenation proeess starts during or immediately after the injection and goes on simultaneously with the excretion of metamorphosed sulphur in the form of hydrogen sulphide through the respiratory channels.

In this brief resume of the important indications of sulphur in treatment no attempt has been made to include all or nearly all of the uses of this very important element. Sulphur is of such vast importance in therapeutics that a review of its more important uses is never amiss.

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SOME RESPIRATORY MANIFESTATIONS IN CIRCULATORY DISEASE.*

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The circulatory system is the greatest contributor of clinical surprises, and, apart from cardiac pain and occasional abdominal manifestations, they are usually mirrored as respiratory phenomena.

The proeess of supplying oxygen and removing carbon dioxid from the tissues is brought about in a two-fold manner: by the interchange of gases between the blood and external air—external respiration, and the interchange of gases between the blood and the tissues—internal respiration. The latter depends upon the quality of the blood and the rate of its flow, both governed by the integrity of the circulatory apparatus. In a clinical sense then the organs of respiration and circulation are mutually inter-dependent and may be regarded as a circulatory-respiratory unit.

The respiratory centre is influenced by efferent vagal nervous stimuli (a negligible factor) and mainly by the composition of the blood—its oxygen and CO_2 content.

Normally the respiratory rate is evenly uniform and varies from eighteen to twenty-four per minute.

In senile and exhausted hearts it is often interrupted by irregular loud sighing. Looked upon at one time as a sign of myocardial insufficiency it is now regarded as an expression of fatigue and excessive nervous excitability. In the young without any determinable etiology or pathology it is purely neurotic, probably in the nature of a habit-tie and is a frequent cause of unfounded anxiety.

Some years back I had under my care a strapping young woman whose respiratory rate would jump to sixty per minute at the approach of the physician. Severe tachypnea, with rates of one hundred or more, without dyspnea, have been repeatedly observed in healthy young soldiers during the World War. Usually transient, they may be, if prolonged, lead to alkalosis.

In neurocirculatory asthenia a nervous dyspnea may occur due to abnormal exeitability and over stimulation of the respiratory centre.

I have often noted in the exhausted hearts dyspnea with marked over work of the alae nasi without cyanosis, or any subjective discomfort. In effusive pericarditis, in my experience, it is a frequent forerunner of the clinically determinable effusion, especially when accompanied by a marked pallor.

On the other hand the periodic or Cheyne-Stokes breathing is found in the graver cardiopathies.

It is a phasic variation of alternately waxing and waning respirations with apneic periods, frequently accompanied by muscular twitching and loss of consciousness during the apnea. Found commonly in cardiosclerosis, renal or arteriosclerotic, in coronary disease and aortic regurgitation it is often accompanied by auricular flutter, fibrillation, and more often, as pointed out by Mackenzie, by pulsus alternans. Cheyne-Stokes breathing is caused by exhaustion of the respiratory centre from want of oxygen (Haldane and Poultoon). Carbon dioxid accumulates in excess and abnormally stimulates the respiratory centre, a disturbing hyperpnea sets in, the excess of CO_2 is ventilated off, anoxemia of the centre with its resultant apnea reappears and CO_2 accumulates again. The cycle is repeated. In a mild form it may occur only at night during deep sleep. When severe it may be continuous, night and day, most distressing to the patient, and defying all the therapeutic efforts of the physician.

The phenomenon spells grave cardiac exhaustion and is a frequent forerunner of death

*Lecture delivered to the internes of Cook County Hospital, October 18, 1932.

—a few days or a few weeks at most. Cases surviving a few years have been observed. Strychnia, warmly recommended by Eyster, was found useless by Means and Edsall, who proved that even large dosage hardly raises blood pressure above ten points. As a cardiac stimulant it is worthless. Atropine is of value. Morphine, theoretically contra-indicated on account of its depressing effect upon the respiratory centre, is in practice the most valuable remedy, especially when combined with atropine. In some cases coramine seemed to me to be of distinct benefit. Inhalations of CO_2, oxygen, or a mixture of both, give good results. Digitalis to improve cardiac tone, and chloral hydrate for the sleep, so frequently disturbed in these cases, are indicated.

Dyspnea, usually cyanotic, is the earliest, most trustworthy manifestation of myocardial weakness from whatever cause. It is especially significant when it appears after exertion, that previously could have been comfortably performed and when associated with pulmonary congestion. Various explanations have been offered; insufficient ventilation of pulmonary alveoli, increased pulmonary volume and decreased elasticity, and an acid intoxication (Lewis) with a lowered CO_2 alveolar tension. Out of the entire mass of argumentative evidence two facts remain: a diminished elasticity of the pulmonary alveoli and a retardation of the flow of blood. Its prognostic significance depends upon the ease with which it is provoked and its response to treatment; with rest—always, with digitalis, if necessary, and oxygen, when severe.

When the dyspnea is severe the patient assumes an upright posture; he may try to get out of bed and spend night after night in a chair leaning forward on the bed or resting on its back to secure some relief and much needed sleep.

At times an over-zealous physician, ignoring the pleadings and protests, orders the patient back to bed, little realizing that the orthopnea is an adaptive measure.

In the upright posture the flow of blood to the right heart is diminished and the cerebral venous congestion is relieved for the respiratory centre is raised above the meniscus of the column of the blood in the jugular veins. The external pressure of the bed is removed, the intra-abdominal pressure is diminished; a mechanical load is thus lifted off the diaphragm and the intercostals; the pulmonary congestion is relieved and the vital capacity is increased.

It is good physiology to permit the orthopneic patient to assume whatever posture best secures for him ease and sleep.

In acute coronary occlusion, besides the agonizing pain, dyspnea is the next prominent symptom. Usually moderate, it may be so severe, that the mere change of posture renders breathing intolerably distressing. Frequently it is paroxysmal, entirely apart from any exertion, more often nocturnal and lasting days or even weeks.

There is a rarer type of acute coronary thrombosis which may justly be termed dypneic. The pain is slight or entirely absent. The attack sets in suddenly with great respiratory distress and severe prostration. The dyspnea is unusually severe, unduly prolonged, and difficult to relieve; it may be accompanied by asthmoid wheezing or fine bubbling rales.

Another type of dyspnea, paroxysmal in character, so-called "Cardiac Asthma," common in cardio-renal cases, coronary sclerosis, and especially in syphilitic aortitis with or without aortic regurgitation, occurs at night with great suddenness and may be accompanied by moist or whistling rales and even spitting of blood. Sudden increase in the intraortic pressure, weakness and overfilling of the left ventricle and pulmonary engorgement were all advanced in explanation of its modus operandi. Quoting Mackenzie, however, we are not at all sure, that cardiac asthma may not arise from the apneic stage of Cheyne-Stokes breathing. The age of the patient, the misplaced apex, the hard pulse, and the frequently associated gallop rhythm or pulsus alternans should prevent us from the not uncommon error of labeling it as bronchial asthma. The outlook is always grave. Death may result with systolic and diastolic pressures remaining high till the very end. Nitrites and alcohol may relieve the milder attacks. Morphine and atropine rarely fail, and inhalations of oxygen are highly recommended. In the plethoric with a high tension pulse, venesection is advisable. Adrenalin should not be given. To prevent its frequent occurrence Marvin recommended intravenous

injections of 50cc-100cc of 50% solution of dextrose.

Summing up the functional respiratory disturbances: dyspnea, orthopnea, cardiac asthma, and Cheyne-Stokes breathing we find them compensatory measures aiming to remove the excess of CO_2 resulting from want of oxygen in the respiratory centre.

This lack of oxygen in all likelihood is due to weakness of the left ventricle.

Welch, working under Cohnheim, produced experimentally weakening of the left ventricle with the following chain of events: depletion of the systemic arteries and venous surcharge with increased pressure in the filling veins, increased capillary tension, loss of the alveolar elasticity, leading to pulmonary congestion and edema. The congestion may be very slight, just moist rales, persistent along the bases, more often along the left. A very valuable sign in the bed-ridden, chronic diseases and acute infections, indicative of beginning of weakness of the left ventricle. It may be marked, giving impaired resonance, rales and suppressed breath sounds, the so-called hypostasis, and when combined with a rise in temperature and an accelerated respiratory rate deserving the justifiable diagnosis of hypostatic pneumonia. The congestion may be even more extensive leading to hemorrhages.

The latter are especially common in mitral stenosis. I have encountered it twice in the post-pneumonic ulcerative aortic endocarditis. In the plethoric hypertensive patient or in a long standing emphysema with asthmatic bronchitis a brisk hemoptysis may be due to a rupture of a selerotic pulmonary blood-vessel (Sir Andrew Clark). The hemorrhage may be slight or threatening. Depletion with hydragogue cathartics and digitalis aim at relieving the pulmonary engorgement and strengthening of the left ventricle. Morphine, rest and the ice-bag are essential. Wiggers maintains that the pituitary extract diminishes the inflow of blood into the right heart chambers, thus lessening the pulmonary pressure, and is the drug par excellence in pulmonary hemorrhage. This is not universally accepted. In two of our cardiac cases pituitrin almost magically controlled the severe bleeding.

A priori in severe threatening pulmonary hemorrhage, venesection ought to be resorted to, for clinically we are familiar with the fact, that hemorrhage occurring in auricular fibrillation with gross pulmonary engorgement often brings considerable relief.

The hemorrhage may prove fatal if a large blood vessel is eroded by aneurysmal pressure. Rarely an aneurysm may rupture directly into the lungs or upper air passages.

Quite another source of pulmonary hemorrhage is pulmonary embolism with infarction. It occurs in valvular disease, especially mitral stenosis, right sided malignant endocarditis: very commonly in the cardiac subacute bacterial endocarditis and from thrombi in the cardiac chambers and pulmonary artery. It is not uncommon in infective thrombophlebitis of the peripheral vessels and, at times, according to Connor, in the apparently well.

Another possible source at present is the popular administration of quinidine in auricular fibrillation. Yet I have frequently seen embolization in auricular fibrillation treated only with digitalis in moderately large doses. Emboli are not uncommon in abdominal and pelvic operations. Many a so-called postoperative pneumonia is in reality either a pulmonary massive collapse or pulmonary infarction.

Acute coronary thrombosis is a frequent cause of emboli. In myomalacia cordis the chambers are dilated, their contractions are weak and ineffieient; blood stagnates, thrombi form, and with the improvement of the cardiac tone, the thrombi are dislodged; pulmonary infarction may result. When the coronary thrombosis is not recognized a diagnosis of pneumonia is erroneously made. Indeed, it is an embolic pneumonia.

The symptoms depend upon the size of the blocked artery. There may be none. Usually pain and cyanosis of varying intensity are followed by spitting of bright red blood. The classical physical findings—medium-sized bubbling rales with or without impaired resonance, at times involving a whole lobe, usually a lower, are as a rule, less diagnostic than the symptoms. The prognosis is always uncertain, but by far graver in the peripheral thrombophlebitic cases, where sudden death is not unusual.

The presence of an etiologic factor, the absence of the chill, the fever, delayed for a few

days, the pureness of the expectorated blood, the absence of bronchial breathing and feeble breath sounds from the very first, with a rapid evolution of the disease, differentiate it quite easily from a pneumonia. In some cases of pulmonary infarction, however, where a whole lobe or a large part of it is involved and is complicated by a dry or effusive pleurisy, its differentiation from pneumonia is difficult. It may also simulate a hydrothorax.

In congestive heart failure the pleural transudate, while usually bilateral, may be unilateral, usually right sided. The dull, to flat note on precussion, basal in location, usually bilateral and nearly symmetrical in extent, even in the presence of rales due to congestion or compression of the underlying lung, make its recognition easy. It is good practice in the presence of respiratory distress and cyanosis, if the hydrothorax is at all extensive, to tap early, first one side, then the other, even before digitalization is begun.

In some cases of mitral stenosis the right sided hydrothorax persistently recurs and requires frequent tapping.

In Pick's adhesive mediastinopericarditis a rightsided hydrothorax from compression of venae azygos or the vena cava inferior may be an early clinical manifestation. It is likely to be mistaken for an effusive pleurisy and the considerable enlargement of the left heart for a displacement.

The liver, however, is considerably enlarged and hard, the specific gravity of the fluid is that of a transudate, the fluid repeatedly refills, and tapping does not change the position of the heart.

One need only call attention to the compression findings in the left chest posteriorly in effusive pericarditis. The marked dullness over the left lower base, the bronchial breathing, at first only at the angle of the scapula, later may be extensive and the not uncommon presence of rales, simulate quite closely a pulmonary consolidation, for which it is quite often mistaken.

The history of a previous rheumatic infection, or evidence of an endocarditis, should put us on our guard; the absence of the expiratory grunt and the marked pallor call for a careful search for a pericardial rub; and a painstaking percussory outline of the precordial dullness will as a rule prevent the diagnostic error. In doubtful cases, the fluoroscope will be of considerable aid.

A frequent sequel of ventricular weakness, dramatic in its onset and threatening in its course, is an acute suffocative pulmonary edema, coming on suddenly with alarming symptoms of oppression in the chest, dyspnea, orthopnea, cyanosis, incessant short cough, cold clammy sweat and a profuse frothy pinkish sputum, ending either fatally or subsiding, merely to recur again at a variable interval. It occurs in the hypertensive cardiorenal cases, coronary sclerosis, is frequently associated with acute coronary occlusion and in my experience, quite commonly in women with mitral stenosis, especially when associated with pregnancy.

Its mechanism is not understood. Landis regards it as angioneurotic, Bishop anaphylactic, Sahli and Krehl think it is due to changes in the capillary wall, functional or inflammatory. Loeb maintains that it is due to overstrain of the left ventricle—since he experimentally produced pulmonary edema in animals by adrenalin injections. The most acceptable view is that of Hare, that pulmonary edema is due to increased capillary tension, accompanied, aided, or preceded by degenerative and toxic changes in the capillary endothelium. Pathologically it is due to an outpouring of a serious exudate into the alveoli and interstitial tissues with considerable albumin in the expectoration.

The threatening dyspnea, frothy pink sputum, bubbling rales, the age of the patient, the markedly enlarged heart, or the presystolic murmur, which may be faint during the attack, at a glance differentiate it from bronchial asthma, the commonest mistake made, and its proper recognition is all important for upon it a life may depend.

Prompt venesection, unless the pulse is weak or the hemoglobin is below 60. In such cases Von Tabora and Fornai suggested bandaging the arms and legs to prevent and lessen the inflow of blood into the right heart; vasodilators in effective doses. Strophanthin, 1/200 of a grain intravenously, if we are *absolutely* certain that no digitalis has been administered very recently for otherwise death may ensue. Morphine and atropine are always of great help; and in the plethoric with a hard pulse croton oil under the tongue serves well. Sur-

geons' aid was called upon for the relief of the recurrent forms of mitral stenosis and slitting of the mitral valves was performed in experimentally produced mitral stenosis, with results hardly promising. The prognosis, always uncertain, is especially grave in pregnant women with mitral stenosis and in cardiorenal cases with a weak pulse.

Quite often asthmatic bronchitides are associated with hypertensive and nephritic cardiopathies; they may be especially severe in cases of mitral stenosis, which is likely to be missed during the height of the asthmatic attack. These bronchitides do quite well with rest, purgation, and digitalis.

The association of pulmonary tuberculosis with cardiac disease is not common. It is quite rare in mitral stenosis. Yet one occasionally sees an indisputable case with tubercle bacilli in the sputum and marked radiographic findings.

An aortic aneurysm by pressure upon a bronchus amy produce a syndrome quite indistinguishable from pulmonary tuberculosis —the so-called aneurysmal phthisis.

In closing let me reiterate that every possible pulmonary finding: congestion, compression, consolidation, hemorrhage, pleural effusion, may be part and parcel of a cardiac or vascular disturbance.

It behooves then the careful clinician to examine carefully the cardiovascular system in every patient with pulmonary symptoms.

FLUID BALANCE

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In discussing fluid balance, I have chosen one topic which is most familiar to a Temple University graduate. Much work has been done and is being done both clinically and experimentally at this school. To Dr. Temple Fay goes much credit in the decreasing of mortality in head injury cases. The dehydration theory, which is not new, but has been revived and renewed by both Dr. Fay and Dr. J. O. Arnold, for the treatment of eclampsia is now an established fact as is proved by the results obtained by the obstetrical records of the Temple University Hospital. In genitourinary practice, work by Dr. W. H. Thomas has shown the efficacy of maintaining fluid balance in regards to cases of prostatic hypertrophy.

Just what does fluid balance mean, and how may it affect so vastly different fields as neurosurgery, obstetrics and urology?

First, fluid balance is the ratio of water intake to fluid output. All fluid consumed, regardless of kind, must balance the output in a normal individual. Granted that some moisture passes off as sweat from the surface of the skin or as vapor from the exhaled air, still the amounts so thrown off are so small as not to seriously affect the numerical value of water intake and urine output.

Second, unconciousness and paralysis in head injuries; coma and convulsions in eclampsia; coma and irrationalness in the cases of hypertrophied prostates; and uremia as a complication often seen in the last two, are, for the most part, directly due to some derangement of fluid balance.

Disturbed fluid balance is as definite a syndrome as is acute appendicitis, or brain or cord tumor. The end result is the same regardless of the primary cause. In head injury, it is due to cerebral edema from direct trauma; in eclampsia, faulty metabolism, and in prostates, hydrostatic pressure from mechanical obstruction to the normal outlet.

Let us take the case of benign hypertrophy of the prostate. When the urethra is closed, the bladder becomes overdistended and back pressure is created. This, in turn, results in hydronephrosis. As the pressure within the kidney increases, the ability of the kidney to excrete becomes less and less, with the result that more and more water is left in the blood. Water in the blood stream is the same as it is anywhere else—it seeks its own level—or follows the course of least resistance. Where does it go? If the chemical composition of the blood is exactly right, there can be a physiologic shift of water into the tissue spaces with the resulting edema—more frequently seen in pregnancy than in prostates, however. But far simpler than this, is the escape into the cerebrospinal fluid system of the brain and spinal cord. Blood with an excess of water content passes through the choroid plexuses of the lateral ventricles and cerebral fluid is excreted into the ventricles. Normally this fluid passes through the system

and is taken back into the blood stream, 90% through the Pacchionian bodies of the great sagittal sinus and cisterna magna, and the remaining 10% through the spinal nerve roots by lymphatics and veins. However, if the blood already has too great a water content, it cannot absorb more, and hydrostatic pressure is built up within the cerebrospinal fluid system. Then things begin to happen: since the skull is a closed box, occupied with brain, blood, and cerebrospinal fluid, an increase of fluid means a diminution of one or both of the remaining occupants. This is exactly what happens. First, the brain is compressed, compression sets up an edema, the edema creates more pressure and draws more fluid to the skull and a vicious circle is established. The edema is also responsible for cerebral irritation and transient paralyses; aphasias, convulsions, or even coma may result. If the increased pressure and edema are great enough, the blood vessels are compressed, the blood supply is shut off and brain atrophy with its irreparable damage results.

This, in the briefest sort of way, is the syndrome of disturbed fluid balance.

Treatment is merely common sense reasoning. Remove excess fluid and limit the intake to balance the output. When cerebral irritation is evident, we know that there is increased intracranial pressure and the quickest and most satisfactory method of lowering it is by spinal puncture. Where it is definitely known that there is no existing posterior fossa tumor, spinal drainage is easily carried out. Complete drainage may be done and repeated every 4-6 hours if necessary. To determine when to drain, take the B.P. every 30 minutes if condition is serious, or every 2 hours if not so dangerous, and drain when the pulse pressure crosses the pulse rate. Again, in the case of the prostate, unless severe cerebral signs are manifested, decompression of the bladder is, of course, started. Then an accurate measure of the output and intake is made—never allowing the intake of any one day to exceed the output of the day previous. Here, in this hospital, as in Temple University Hospital, a regular intake-and-output chart is kept with the nursing records—a blue column indicating intake and a red column indicating output. Thus, a quick glance shows the amount of kidney function. At first, until the accurate output is ascertained, the patient is put on a restricted dry diet and allowed but twenty ounces of fluid per day. (An exception to this will be noted later.) The time necessary to find a constant output is usually 24-48 hours. Then the intake may be gradually increased until a balance is reached—not forgetting, of course, that if the patient is hydrated, holding the intake down will aid removal of excess fluid.

This latter procedure, however, may not dehydrate with sufficient rapidity, and yet the patient may not be ill enough to warrant repeated spinal drainage—then the intravenous use of hypertonic solutions is indicated. Magnesium sulphate and 50% glucose are the drugs of choice. Magnesium sulphate is only used for rapid dehydration and is contraindicated in the presence of shock. The dose is one 20 c.c. ampoule of a 10% solution. Glucose serves a double purpose. It not only takes fluid from the brain but also, this same fluid tends to build up the blood volume in that its hypertonic action is faster than kidney elimination. This factor is of value in head injury cases where the blood pressure tends to drop. If necessary to rapidly build up a falling blood pressure, normal saline or Ringer's solution, in small amounts, can be given with the glucose. Magnesium sulphate enemas given alone or in conjunction with intravenous medication are of benefit in lowering intracranial pressure due to their hygroscopic properties. Before closing, I should like to read the summaries of treatments of eclampsia and head injuries as used in the Temple University Hospital.

ECLAMPSIA

Consider every patient from the standpoint of the amount and distribution of surplus water in her tissues.

Make careful observations and records of 1. Blood Pressure—at least every 2-4 hours. 2. Urine output. 3. Fluid intake. 4. All complaints and symptoms—pain, headache, vomiting, stupor, disturbed vision—convulsions (number, frequency, duration, and degree of severity).

Pre-eclampsia, of whatever degree, leading up to and culminating in the "convulsive state," eclampsia is best considered and treated as but one condition, in varying degrees of severity, or stages of advancement, as:

1. The moderately Pre-Eclamptic Stage.

2. The Dangerously-Threatening Pre-Eclamptic Stage.

3. The Eclamptic, or Actively Convulsant Stage.

The outline of treatment for each stage is as follows:

First Stage:

(a) Withhold (or restrict to a minimum) all fluids until the 24-hour urine output is known.

(b) Total fluid intake in next 24 hours is not to exceed previous day's output of urine.

(c) Chart accurately the daily intake, output, and weight, and maintain, as far as practical, a balance of fluids, and a control or reduction of weight.

(d) Dehydrate moderately with small daily doses of saturate solution of magnesium sulphate.

(e) Give salt-low diet,—comparatively dry or solid fluids of wide variety, including proteids, and excluding ice cream and other sweets.

(f) Allow small meals, at 3-hour intervals throughout the day, with no food or drink at any other time.

Second, or Dangerously-Threatening Stage.

Follow the same general principles as for mild cases, but add the following more immediately effective measures:

(a) Begin at once to dehydrate by giving intravenously 50 c.c. doses of 50% glucose, and repeat the same in 4-6 hours, if necessary.

(b) Give magnesium sulphate (saturated solution) by mouth, until effective in watery stools. Repeat daily, or as indicated. (Rarely, one or two 20 c.c. doses of 10% solution magnesium sulphate intravenously, may be substituted.)

(c) If very urgent, or no marked improvement is seen in 15-30 hours, do one or more spinal drainings, at 4 to 5 hour intervals.

(d) If spinal drainage is impractical, venesection may sometimes be substituted, but not where labor is well established, or early delivery is anticipated.

(e) When the immediate danger has been abated, keep a careful weight chart, and maintain a strict fluid balance throughout the remainder of pregnancy.

Third, or Convulsant Stage.

(a) If absolutely necessary to facilitate other treatment, begin with a sedative intramuscularly. (Sodium luminal gr. iii, or very rarely, Morphine gr. ¼ to gr. ½.)

(b) Give at earliest possible opportunity, 50 c.c. of 50% glucose intravenously. (20 c.c. of 10% magnesium sulphate may sometimes be substituted, or added.)

(c) Drain spinal fluid as completely as possible (45 to 100 c.c.) preferably with head raised to an angle of 30 degrees. (When spinal drainage is impracticable, venesection may be substituted.)

(d) Repeat glucose in 3-4 hours, and spinal drainage in 4-6 hours, if marked improvement is not seen.

(e) Give magnesium sulphate purge at earliest opportunity, and repeat as indicated for continuing dehydration.

(f) Absolutely no other fluids are to be given for at least 24 hours, and careful record kept of T. P. R. and pulse-pressure.

(g) If dehydration has been thorough and effective, the uterus need not be emptied, nor labor induced or hurried, except for reasons other than the attack for which the patient is being treated.

HEAD INJURY

(a) A brief outline of the treatment of severe head injury.

1. "Secure and maintain conciousness at all costs."

2. Inspect the air way and keep it clear. Make sure that patient does not swallow tongue.

3. Note and record pulse, temperature, respiration and blood pressure.

4. Treat shock, unless hemorrhage is severe.

i. Arrest hemorrhage.

ii. Restore body temperature.

iii. Relieve pain and restlessness (moderate doses of morphine).

iv. Raise the blood pressure.

a. Atropine (gr. 1/100) to check vasodilation.

b. Pituitrin, surgical (M.xv).

c. Strychnine sulphate (gr. 1/30, if needed).

d. Restore blood volume.

1. Sterile, balanced, 50% solution of glucose intravenously (40-60 c.c.).

2. If tissue fluid loss has been very great, *small* amounts of sterile normal saline solution may be given intravenously.

3. Blood transfusion may be indicated.

5. Debridement of the wound should be done, when the patient begins to come out of shock.

i. Open wound freely, clean the edges.

ii. Remove all dead macerated and oozing tissue.

iii. Check hemorrhage and get a clean field.

iv. Dress the wound.

Unless a very marked depressed fracture, or a compound, comminuted fracture exists, suturing, x-ray or operation is not attempted at this time.

6. A general physical examination, noting and recording all findings normal and abnormal. At this time other injuries, which may have occurred, should be noted not only for treatment but also to prevent them from later obscuring a neurological picture.

7. Spinal puncture, under surgically aseptic technique, the spinal fluid pressure being taken and recorded; the character of the spinal fluid noted and recorded, and unless contraindicated, spinal drainage is done. A sample of the fluid is sent to the laboratory for examination.

i. Repeated drainage is not necessary at this time if the fluid is clear.

ii. If spinal fluid is bloody all of the fluid obtainable is withdrawn.

(b). Hospitalization.

1. Sedatives.

i. Sodium luminal (gr. 1-3, hypo.).

ii. Chloral (gr. xv.) and if unconscious; Chloral gr. xxx, bromide gr. xl in water oz. iv by rectum.

Sodium bromide (gr. xxx- by mouth).

iii. Morphine, q.s., as a last resort.

2. Routine orders. (Modified to meet the requirements of the case.)

i. Elevate the food of the bed.

ii. Record T.P.R. every 15 minutes.

iii. Record B.P. every 30 minutes.

iv. Chart pulse pressure every 30 minutes. "When the pulse pressure crosses the pulse rate, that is the time to dehydrate."

v. Blood count, complete.

vi. Type blood (when the report returns it is time to notify donor, if there is a likelihood that transfusion is needed).

(It is easier to send a donor home, not wanted, than to need one and not have him.)

vii. Urinalysis, when specimen is obtained.

viii. Solid diet if possible.

ix. Restrict fluids; to oz. xx in 24 hours, if the spinal fluid is clear; oz. xxx-xxxii in 24 hours if the spinal fluid is bloody.

(Allow more fluid for spinal drainage.)

3. Record fluid intake and output, daily until the second week.

4. Repeat the initial dose of pituitrin every 4 hours.

5. If necessary to make up blood volume, give 50 c.c. of 50% glucose intravenously and follow with small amounts of normal saline if needed.

6. If pulse pressure continues to approach the pulse rate, further dehydation must be secured by:

i. Spinal drainage.

ii. Enema containing:

Mag. Sulph. crystals,	oz. iii
Glycerine,	oz. i
Water, q.s.ad.	oz. vi

This may be repeated if ineffectual.

iii. Mag. Sulph. by mouth.

Mag. Sulph. crystals oz. $\overline{s\,s}$ in water oz. vi.

iv. A better method is to combine the Mag. Sulph. enema with the intravenous administration of glucose.

Magnesium sulphate is contraindicated in any procedure when the patient is in shock or when there is a marked reduction in blood volume.

(Causes too rapid dehydration.)

With shock controlled and intracranial pressure reduced, brain edema is at a minimum and the brain is receiving an adequate supply of blood and oxygen, with a diastolic pressure of 60 or above. It is now possible to make a detailed neurological and x-ray examination. If focal signs indicate that a decompression must be done, it is now possible without danger of a "Tight brain."

7. Suture lacerations.

(c) Post hospitalization phase.

1. Limit the patient's fluid level to not more than oz. xxxii-xl per 24 hours for at least 3 months to prevent post-traumatic sequelae, e.g., dullness, headache, vertigo, tinnitus, etc.

2. Instruct the patient how to take care of himself; explain the nature of his condition to him, or his family, and caution him to avoid further trauma. The latter is of considerable importance as it may mean a change of vocation.

3. Attempt to get the patient back to work within six weeks if possible but not later than six months. The sooner the patient resumes his

normal life the less likelihood there is of him developing post-traumatic neurosis.

4. Definitely caution the patient against ever indulging in any fluid excesses, more especially of alcohol in any form, at any time for the rest of his life.

5. Occasional physical and neurological examinations and other studies to determine whether or not mental or physical disabilities have resulted from the injury and, if so, to what extent the patient is incapacitated. Here, as well as during the time when the patient was hospitalized, accurate, concise and complete records must be kept. Such records are of untold value in medico-legal cases.

Since this is only a brief outline for the treatment of a severe head injury, it is not to be considered as a formula because routine treatment is not possible for this type of case.

Each patient must be handled as an individual problem. Experience and plain common sense, plus a careful observance of the signs and symptoms with due regard therefore, are needed to decide which measures may be of value, and which are contraindicated, for each particular case. Some understanding of the pathologic physiology, as well as the normal physiology, is essential. If so, it is much easier to map out a plan by which to secure the return of normal function. It is as important to know *why* to do a procedure as to know *how*.

In conclusion, I should like to state that in the past four months I have seen here several cases representing the three types discussed. They were handled as described, with variations to suit the case, with highly favorable results. At no time was the oldtime bug-bear of forcing fluids to wash out so-called toxins used. One of the more interesting cases, now recovered and working, was one of Dr. O. J. Rabe's. Another, a patient still in the house, is one of Dr. J. H. Hutton's.

Fluid balance, although not a miraculous cureall, deserves more careful consideration than it has received. The simplicity of its management and the brilliance of its results permits the value of fluid balance to stand on its own merits.

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DEGENERATIVE HEART DISEASE*

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A few short years ago, beginning approximately at the time of our entry into the world war, the medical profession began to witness another of those cataclysmic changes which have occurred in medical thought and practice at odd intervals since Hippocrates brought out his monumental works. So far as our present day conceptions of physiology and pathology are concerned this newer group of concepts has assumed importance and has had effects on medical thought that rank with the discovery of general anesthesia in surgery and the allergic reactions in skin affections and asthma.

I believe that the apparent rise of degenerative cardiac death rate has really not been as great as statistics would have us believe. (American Heart Journal, Apr. 1932, Robt. Levy, New York.) Robert Levy of New York, writing on coronary sclerosis in the April, 1932, *American Heart Journal,* showed by autopsy records of the Presbyterian Hospital, 1920 to 1929 inclusive, that there has been no change in percentage of coronary artery disease incidence during that period. During that same period however the percentage diagnosed increased fourfold showing conclusively that *better diagnosis* is the real answer, rather than actual increase. With frequent electrocardiographic study, blood pressure readings, and increased interest of the profession together with the marked excellence of the rather voluminous literature of the past few years on this subject, more cardiopaths are properly diagnosed than formerly. Just as the cases of appendicitis in our grandfathers' time were present but not diagnosed as such, so it has been with heart disease until the past few years. Elderly people who once died of "asthma" now die of cardiac failure induced by hypertension, coronary disease and heart block, and we can prove it with the means at hand. One of, if not the most striking of the new concepts, is our change of attitude as to the cause of heart failure from one of valvular pathology, to one of physiological pathology of the myocardium itself. So marked has this change been that many cardiologists today do

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not even trouble to diagnose the valve involved. Thousands upon thousands of cardiac autopsies have shown us that in less than forty per cent. of cardiac deaths is any valvular pathology found. Of this less than forty per cent., the valvular lesion is an associated finding of far less importance to the patient than the main lesion of the myocardium which is responsible for the symptoms of congestive failure when compensation becomes inadequate to meet the demands of life. Hypertension of advanced grade may be maintained for several years without demonstrable failure provided the myocardial blood supply is intact and adequate. Something else must supervene before failure occurs whether that something be a thrombotic accident, infection, increased demand from altitude changes, or a progressive coronary sclerosis and stiffening which cuts down the reserve factor.

In order to clarify if possible, the group of cardiopathies which I intend to discuss in this paper, I wish to offer a classification of heart disease which has helped me considerably in differential diagnosis. It is really a combination of opinions from such recognized authorities as Cabot, Reid, McKenzie, Pareja, Vaquez and others, containing a little of each. A particular heart classified according to the scheme, will be found easier to study and understand for the groups are fairly distinct and for the most part overlap but little. Having had the honor of being on the pathological staff of the late A. S. Warthin of Ann Arbor, I can appreciate the wide divergence of opinions expressed by pathologists generally concerning many of the points in the background of these degenerative cardiac lesions. I have, therefore, confined myself largely to a clinical grouping as can be seen. Having placed the study in one group it is rare that one of the others enters into the picture to any great extent with the exception of progressive coronary sclerosis.

	Age Increase	Type
1.	0 to 10	Congenital
2.	10 to 35	Rheumatic (a) Malignant endocarditis. (b) Ch. infectious endocarditis.
3.	40 to 50	Syphilitic 5%
4.	50—up	Degenerative 70%
5.	50—up	Anginas
6.	40 to 50	Endocrine disease, hypo and hyperthyroid or pituitary.
7.		Mechanical interference (a) Associated lung disease. (b) Pericarditis (c) Pericardial adhesions.

My particular interest at this time lies in the degenerative group 4, which constitutes approximately 70 per cent. of the total. It is this group in which heart pain and angina largely occur, though as can be seen I have classified the anginas under separate heading. This seems a justifiable procedure since angina may occur without any demonstrable pathology referable to degenerative processes. Whether angina ever occurs without coincident pathology I seriously doubt. Certainly our present methods do not always show it. The statement of the great McKenzie on this point is worthy of consideration. He says that "the fundamentals of understanding of disease is not found in structural pathology alone but must rest as well upon functional pathology." The heart of exophthalmic goiter is a case in point.

Hypertensive heart disease, the first subdivision of the degenerative group, even now rests upon insecure footing so far as its pathology is concerned. The primary dilatation and later hypertrophy which occur in these people seem to be compensatory phenomena but why the increased pressure in the first place? Tremendous pressures may be maintained for many years without the slightest evidence of cardiac fatigue or embarrassment as we have all repeatedly seen. So far as we know the compensatory power of normal hearts with adequate blood supplies is not a limited quantity. It is the general opinion among cardiologists that no physical strain which a patient may voluntarily impose on a normal heart will over-ride its capacity to serve. The answer to the riddle as to why these hearts of hypertensive patients fail must be sought elsewhere than in simple increased pressure. The key to the solution must lie in some retrogressive change from myocardial infection, toxic degeneration or failure of the blood supply to the heart muscle itself. It is for this reason that I classify hypertensive heart disease with the degenerative group. I would call your attention also to the fact that no actual heart disease is present in these people until these retrogressive changes take place.

Fundamentally speaking, the compensation of the hypertensive heart, except where active toxic myocardial changes or infection super-

vene, depends upon the integrity of the coronary circulation which is the keystone of the arch. Failure of the myocardium is normally to be expected sooner or later, depending upon the unknown rate of decreasing resiliency of the ever changing and labile coronary system. The heart first responds to increased pressure demands by stretching its fibres or dilatation and later moderate increase of myocardial tissue or hypertrophy. This latter calls for more blood supply per unit of time which is supplied by dilatation and perhaps a limited amount of growth in the coronary system. With stationary hypertension a balance is established and little harm results. With increasing pressure demands, however, the growth of blood supply may fail to keep pace with hypertrophy and a coronary circulation, never blessed with much power of increase by growth and denied, or limited in, the power of anastamosis, is faced with demand beyond capacity. Starvation and failure of myocardium becomes inevitable.

Viewed in this light hypertensive heart disease and progressive coronary sclerosis are closely allied conditions and should be discussed together. The failure in the latter instance however, is the result not of real increase of myocardial demand beyond coronary capacity but decrease of coronary capacity below a stationary or receding myocardial demand as age increases. This type of heart is not hypertrophied at autopsy but may be actually atrophied. Failure of a normal sized heart is practically always diagnostic of coronary disease. Where there has been a preceding hypertension and coincident hypertrophy the heart sizes are found much greater. In the presence of cardiac failure with evident coronary disease it is often possible to deduce a previously existing hypertension by this means alone. The point is important in that your present blood pressure reading may be normal or below. When the physician knows of or deduces a previously existing hypertension in a patient whose systolic readings are now within normal limits, he must be very sure that the drop in pressure is not due to a failing myocardium which cannot carry the burden any longer. Apparent improvement in systolic blood pressure may be bought at the expense of cardiac dilation which is really of *bad import*. Many serious errors may be avoided if we can train the profession to rely equally on the diastolic and systolic pressure. In most cases of partially decompensated hypertensive hearts the diastolic pressure remains high or, actually, shows a rise. Conversely I can recall numerous instances in practice where, starting with congestive signs, such as moisture in the lung base, cough, orthopnea, enlarged liver, oliguria, etc., with normal systolic and high diastolic pressures there has been progressive improvement with rising systolic and dropping diastolic after rest and medication

Another important point about hypertension which has been stressed but little is the vascular crises these people have, sometimes for no apparent reason. They complain of sudden giddiness and prostration, flushing of the skin, and at times have mild mental changes. Examination at these times may show abrupt rises or again drops in either systolic or diastolic pressures or both. A few hours later pressures are again stabilized and symptoms gone. It would seem from this that symptoms are most likely to appear when pressures change upward or downward and not at stationary levels. Reasoning from this basis it has been my practice to keep the circulation of these people under at least the partial control of medication as a means of lessening the frequency and severity of these attacks. I have used cardiac medication, xanthin bases and even general sedatives with equally good results. The point becomes especially important where anginal attacks are complained of. Reid (The Heart In Modern Practice) believes that the anginal syndrome is a functional disorder and is largely, if not altogether, due to failure of the peripheral capillary bed to dilate under strain and exercise, and that this failure leads to increased intra-aortic and intra-cardiac pressures with coincident pain reflex! This would put true angina and the vascular crisis previously mentioned on the same basis, the difference being one of localization only. It is interesting to note that the same therapeutic measures will control both in the majority of instances.

As to the primary cause of hypertension, I do not believe that anyone has yet given a satisfactory explanation. Focal infection and nervous influences, heavy responsibility, alcoholic and other excesses, inheritance, endocrine

disturbances and many other factors certainly enter into it but definite information as to causal relationship is not shown. It seems to me that the primary condition is compensatory to some factor as yet undiscovered. I do not believe the condition is curable in the light of present knowledge. To some extent it can be improved and many times a favorable drop to certain minimum basic levels is attained but I have not yet seen what I regard as a cure. Perhaps the internal glandular field may offer us something when we know more about it. Perhaps the great McKenzie was near to the truth when he stated, (Disease of the Heart), that "the fundamentals of our understanding of disease are not found in pathology alone but must be sought in functional pathology as well."

Coronary sclerosis in contrast to hypertension has good foundations on which to rest—pathology here is definite and positive and the course to cardiac infarction, acute or chronic is well known and definite. Regarding the accident of acute thrombosis, Reid says, "The recognition of this condition by clinicians may be said to be a feature of American medicine." To quote McKenzie again, "The nature of the heart *trouble* which occurs in advancing years depends on the structure in which capillary obliteration is most advanced." He goes on to show that similar lesions in the anterior or posterior coronary system may at various times give partial or complete heart block, delayed conduction, disturbances of the auricular rhythm or merely ventricular weakness. Lesions within or near the genetic system seem to be particularly serious.

Thrombosis of a diseased coronary artery is probably the greatest insult the heart muscle can receive, next to direct injury by projectile, and leads to many acute failures. When the accident occurs in a small vessel or as the end result of gradual occlusion by sclerosis over a period of months or years the condition is not so dramatic, often not accompanied by pain and may even make little inroads on the cardiac efficiency. While we were taught as students that the coronaries were end arteries there is evidence to show that, in some individuals at least, a limited anastamosis has taken place. In some individuals where actual thrombosis or obliteration has taken place there is undoubtedly either canalization or growth of new vessels. We must believe this when we see hearts that are bad clinically and electrocardiographicly one year, improve and show little or no signs of disease the next. For this reason a diagnosis of coronary sclerosis or even block does not necessarily demand a fatal prognosis. We now believe that the majority recover. Nathanson of Minneapolis, writing on coronary sclerosis from the clinical standpoint, (J. A. M. Sc. Aug. 1925), found the following in 139 autopsied cases:

1. The average age was 59.6 years.
2. Males predominated in the proportion 6 to 1.
3. Eighty per cent. had pain coming in attacks of anginal type while ten had nocturnal dyspnea and ten per cent. no signs.
4. In twenty per cent. progressive failure called the physician's attention to the malady.
5. The character of pain was described as a sense of fulness or pressure, substernal, worse after exertion, without radiation in ten per cent. This is typical of the "stenocardia" or "angina of effort" of Vaquez. In twenty-five per cent. the pain was epigastric . . . . something for the surgeons to think about! In ten per cent. nocturnal dyspnea was the only complaint.
6. Death without general edema was usual. 60%.
7. Forty per cent. died in definite congestive failure.
8. Sixty per cent. had enlarged hearts, while forty per cent. showed normal size.
9. Actual coronary thrombus was found in twenty per cent.

The differentiation of the clinical syndrome of coronary sclerosis from the anginal syndrome described by Heberden originally has confused the medical profession considerably in the past and this seems a good place to discuss them briefly: Heberden's original description 1768 and Rouguons (Besancon 1768) is as good a picture of stenocardia or angina of effort today as it ever was. Angina of decubitius described more recently by Fraenkel Brunton, Vaquez and others is known to be due to definite heart strain with dilatation. The point is that angina is a particular type of *pain* which may be found in a number of different diseases of the heart, great vessels or perhaps even the general capillary system and which may be provoked in many different ways. There may be much associated pathology or none demonstrable. The seriousness of the prognosis where anginal pain exists *depends largely upon the associated findings;* always bear in mind that observation and knowledge as to the amount of control possible are im-

portant prognostic points. A change or progressive drop in systolic or in diastolic pressure is to be regarded as of serious import. Any anginal pain which is not promptly relieved by rest with or without the nitrites should be viewed with alarm. A persistent sense of impending death after disappearance of pain should lead to a warning of the patient's nearest relative which may save the attending physician much embarrassment. Congestion of the lung bases during or after an attack of pain has about the same significance. I follow the rule in my own practice that a diagnosis of angina pectoris is not sufficiently enlightening for my purposes. I fail to find in my records of past cases such a diagnosis. There are many who have the anginal syndrome *but the fact appears in the history;* their final diagnoses read coronary sclerosis, aortic aneurysm with involvement of the coronaries, chronic essential hypertension, auriculoventricular block, cardiac infarction, coronary thrombus and the like. A few have had pernicious anemia, diabetes mellitus with coronary endarteritis. The majority have had plain old fashioned arteriosclerosis with which we all expect to die if we live long enough! I have seen several typical attacks follow the induction of artificial pneumothorax brought on, no doubt, by the change in intrathoracic pressure ballances. Quite naturally the question of treatment arises in the mind of any man dealing with these conditions in daily practice. At the risk of some criticism and with the understanding that many may not agree (including myself at some later date), I am willing to discuss a few points along general lines. I recognize of course that the majority of these conditions are fundamentally of an incurable nature. In general therefore, the first move should be to reduce the demand below the known capacity. This may at times mean cessation of all physical activity, even to bed rest. Again it may mean only curtailing some specific activity such as stair climbing or the rapidity of the walk to the place of business. I usually try to keep elderly people "moving" and interested in their usual pursuits as long as possible. A little care in teaching a patient how fast he may walk without discomfort has been time well spent in my experience. The case of one of my elderly mild diabetics of exceptionally high grade intelligence is worth quoting. He had a coronary sclerosis and by close observation and experiment we found that he could walk at the rate of sixty steps per minute almost indefinitely without discomfort. Seventy-five produced discomfort while one hundred stopped him within a block. Another valuable hint in therapeutics is to teach people with degenerative heart disease to "be their age." I have had plenty of patients at sixty or more who will drive three hundred miles a day if allowed to, and incidentally call me out at night to relieve their pain. There are innumerable high grade business men who will insist on playing thirty-six holes of golf on a holiday, because it is a holiday. There are plenty of sixty-five year olds who carry the universe on their shoulders, not to mention a big business with all its details, simply because they are used to doing it and are too egotistic to see that their forty year old sons or associates, or vice-presidents or what have you, can relieve them of most of the burden and should be allowed to do it. The combination of executive and workman at sixty is not a good one for cardiac disease. As to management of acute congestive failure, I shall say nothing. There are however, two drugs for routine long continued use which I believe have considerable value. The first is iodide over long continued periods. It seems to help arteriosclerosis generally (in spite of lack of experimental proof) and many times causes the complete disappearance of symptoms for considerable periods of time. The other is the theobromine class of coronary dilators whose foundation in experimental proof is on solid ground. Many patients whose limits have been narrowing for months, will gradually improve under them; sometimes the improvement amounts to clinical cure. Another important point is the removal of extra cardiac physical disabilities and sources of intoxication and infection. In this class comes the sluggish colon, the boggy prostate and the unclean mouth. These are at best extra loads there is no sense in having any patient carry.

Early in my medical career, as a member of the American Expeditionary Force, I was much impressed at the extensive amount of physical damage men can suffer and remain alive. Since that time in civil life I have even

increased my respect for them. I am convinced that the human species is at the top of the animal kingdom, not alone by the possession of hand, heel and brain, but also because of the inherent tenacity with which it clings to life. The species is tremendously strong and infinitely adaptable and therein lies the secret of race survival or at least a part of it. The wonder to me, is not that humans die of heart disease, but that they go on and live and accomplish after such extensive damage.

THE BIOCHEMISTRY OF THE BLOOD AS DIFFERENTIAL DIAGNOSTIC AID IN DISEASES*

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THE CLINICAL SIGNIFICANCE OF BLOOD ANALYSIS

The circulating blood conveys nutritive substances to the organs for assimilation and absorption. It also conveys the waste products which result from the catabolic and anabolic processes of the cells and tissues. It is evident that any pathological condition, transient or permanent, may alter, more or less, the chemical constituents of the blood.

It is the purpose of this paper to point out, briefly, the indications of chemical determinations of the blood, discussing individually the changes of the chemical constituents that are commonly met with under various abnormal conditions.

Table I illustrates the different values of the more important constituents as they occur in various diseases:

(1-6) *Total Solids* (Protein, Albumin, Globulin, Fibrinogen and Total Nitrogen): While chemical evidence of an increase or decrease of the constituents may be determined very simply, the amount of information actually obtained through such determinations is so insignificant that these determinations, thus far, have not been used in routine practice. It may be stated, however, that in cases of lipoid nephrosis the Globulin-Albumin ratio is of considerable significance. Total protein may be determined by determining total nitrogen.

(7) *Hemoglobin:* Hemoglobin is a very complex substance consisting of globin and hematin (the hematin being composed of iron and a pigment known as hematoporphyrin). It occurs in the circulating blood in two forms, namely as oxyhemoglobin (arterial blood) and reduced hemoglobin (venous blood).

The amount of hemoglobin in the blood is determined usually by matching the color either of the whole hemoglobin or of the decomposed hemoglobin with known standards. As the percentage of hemoglobin in the blood of healthy individuals fluctuates with age and sex from 14 to 17 grams per 100 cc. (assuming 5 million corpuscles in 1 cmm.) it would be advisable to determine the amount of hemoglobin in the blood by making a quantitative determination of the iron. The proportion of iron in hemoglobin is constant, lying between 0.33 and 0.34 per cent. In 1923, Wong described a method for determining hemoglobin accurately through its iron content and this method has already been adopted to standardize the various available hemoglobinometers. An exact standardization of arbitrary instruments, expressing the amount of hemoglobin or iron, for matching the color of the blood to be examined, would help to avoid the errors made in laboratories.

An accurate estimation of hemoglobin is, therefore, more satisfactory than a red corpuscle count. It helps the physician to judge the degree of anemia and the results of treatment.

An increase of hemoglobin may be observed in change of residence from a lower to a higher altitude, because with increase of the altitude the fraction of oxygen taken up by the hemoglobin is diminished, in poorly compensated heart diseases, in chronic diarrhea and polycythemia vera. A decrease is noted in various forms of anemia and after repeated hemorrhages. A slight decrease is also observed in infection with intestinal parasites.

(8-12) *Total Non Protein Nitrogen (N.P.N.):* Total N.P.N. normally varies from 20-40 mgs. per 100 cc. of blood. This normal variation depends to a great extent upon the state of digestion and the amount of absorption from the digestive tract. This is the reason for making these determinations on blood drawn before the patient has had breakfast. It is generally understood that N.P.N. includes Urea N., Creatinine N., Uric acid N., Ammonia N.,

*Presented at the Scientific Staff Meeting of the Grant Hospital of Chicago.

TABLE I

Chart showing average range of normal and abnormal chemical constituents of circulating blood.

		Volumetric contents figured upon a total blood volume per 5 liters	Variations in chemical constituents of blood per 100 cc.		Blood analysis is indicated in the following conditions:	
			Normal	Pathological	Conditions in which increase is found	Conditions in which decrease is found
1.	Total solids		19-24%		Anhydremia.	Anemia.
2.	Total Serum Proteins		6-8.2%			Nephrosis.
3.	Albumin (Serum).		4.5-6.8%			Nephrosis.
4.	Globulin (Serum).		1.2-2.3%		Syphilis, pneumonia, uremia, anaphylaxis, nephrosis.	
5.	Fibrinogen (Plasma)		0.3-0.6%		Pneumonia, septicemia.	Liver diseases and cachexias.
6.	Hemoglobin		14-16%		Polycythemia vera, chronic pulmonary diseases.	Any form of anemia.
7.	Total Nitrogen		3-3.8%		Those condltions in which protein increases are found.	Those conditions in which proteins are decreased.
*8.	Non Protein Nitrogen	2 grm. = ½ dr.	20-40 mg.	40-400 mg.	Eclampsia, glomerulo nephritis, metallic poisoning, cardiac failure, hepatitis, intestinal and prostatic obstructions.	
9.	Urea Nitrogen (Urea--Urea N x 2.142)	0.5-1.0 grm. 1.07-2.14 grm.	10-20 mg.	20-350 mg.	Urea either parallel or with relative increase.	Nephrosis.
10.	Creatinine	0.05-0.10 grm.	1-2 mg.	2.5-35 mg.	Nephritis.	
11.	Uric Acid	0.1-0.2 grm.	2-4 mg.	4.5-20 mg.	Nephritis, gout, arthritis, eclampsia, lead poisoning and acute infections especially pneumonia.	
12.	Indican	2.5-10 mg.	0.05-0.20 mg.	0.25-4 mg.	Uremia due to nephritls and vascular diseases of the kidney.	
13.	Sugar	4.5 grm. = 1 dr.-1.5 dr.	80-120 mg.	70-800 mg.	Diabetes, thyrotoxicosis in pregnancy, severe nephritis, pancreatitis.	Cirrhosis of the liver, polyglandular insufficiency, tumors of the pancreas and hyperinsulinism.
14.	Cholesterol	7-10 grm. = 1 teaspfull	140-200 mg.	60-1.000 mg.	Diabetes, nephritis, lipoid nephrosis, biliary obstructlon, pregnancy, xanthomatosis and some cases of carcinoma.	Pernicious anemia.
15.	Chlorides as NaCl in plasma	25 grm.	450-500 mg.	300-850 mg.	Nephritis, cardiac conditions, prostatic obstruction.	Diabetes, chronic fever, pneumonia and high intestinal obstruction.
16.	Calcium	0.45-0.55	9-11 mg.	3-20 mg.	Extensive metastases of tumors to the bones, hyperfunction of the parathyroid.	Infantile tetany, parathyroidectomy.
17.	Inorganic Phosphorus as P. Adult Children	0.20-0.30 grm.	 3-4 mg. 4-6 mg.	 4-40 mg.	Terminal stages of nephritis.	 Rickets.
18.	Icteric Index		(Term 1:10.000 $K_2Cr_2O_7$) 4-6	10-225	In latent and manifest jaundice.	
19.	CO_2 Capacity	12 gr. =tbspf. $NaHCO_3$	50-75 Vol. %	5-130	Alkalosis.	In diabetic and nephritic acidosis.

* Numbers 8-12 are Split Products.

TABLE II

SUMMARY

The following quantitative determinations are recommended: *(Numbered according to relative importance).

	Diseases	Sugar	Cholesterol	N.P.N.	Urea N.	Creatinin	Uric Acid	Indican	Chlorides as NaCl	Calcium	Inorganic Phosphorus	Vanden Bergh Icterus Index	CO_2
1.	Diabetes Mellitus	+*											
2.	Diabetic Coma	+2	+3										+1
3.	Acute Nephritis				+2			+1					
4.	Chronic Nephritis	+6	+7	+2	+3	+4	+5	+1	+8	+9			
5.	Lipoid Nephrosis	+3	+1	+2									
6.	Uremia	+7		+4	+2	+3	+5	+1					+6
7.	Toxemias (Pregnancy, eclampsia, tumors)			+1	+2		+3						+1
8.	Disturbances of G. I. tract			+1					+2				+3
9.	Xanthomatosis	+2	+1										
10.	Conditions involving pancreas, gallbladder or liver	+2	+3		+4							+1	
11.	Disturbances of G. U. tract				+1	+2	+3	+4					
12.	Tetany, bone diseases									+1	(+2)		
13.	Poisoning, (Metal, Phosphorus, Chloroform, etc.)				+1	+2							
14.	Gout			+2			+1						

Amino Acids N. and unknown nitrogenous products. Under pathological conditions, it is important to interpret the ratios of these nitrogenous constituents composing the total N.P.N. For example, it is an established fact that whenever the total N.P.N. increases, either one or two or all of the component constituents will of necessity also be increased. It is true, too, that both Creatinine N. and Uric Acid N. may remain normal, while Urea N. becomes increased, thereby elevating the total N.P.N. correspondingly.

While we understand that N.P.N. determinations are indicated essentially in renal diseases, it is also important to know under what conditions the determinations of the other nitrogenous components are of value. I mean that while in the early stages of nephritis one may want only Urea N. and Indican determined in the later stages of nephritis more information may be obtained by determining creatinine N. and uric acid N.

Generally speaking N.P.N. retention is indicative of an impairment of the glomerular apparatus of the kidneys. In severe infections, however, nitrogen retention is due to dehydration and does not indicate renal involvement. In chronic nephritis, associated with anemia, there is as a rule a marked retention of nitrogen.

Concerning Urea Nitrogen and Creatinine: Some workers assume that an impairment of the kidney is first manifested by an increase of uric acid and that with the progress of the disease the level of urea nitrogen and creatinine begins to rise. In several hundred analyses carried out in our laboratory, I observed that this was true in the majority of cases but I noticed also first a considerable retention of urea nitrogen, while the uric acid and creatinine were still within normal limits. In explaining this statement I wish to say, that in the course of the metabolism, the purine bases become at first converted into uric acid, a large part of which is excreted in the urine. In cases in which the glomerular apparatus is impaired, part of it is retained in the blood which is subjected to further oxidation forming dialuric acid and in some cases also allan-

toin. These substances are finally decomposed by an enzyme, uricase, to urea. Under pathologic conditions, therefore, urea accumulates in relatively higher levels than does uric acid (See Table I, 9, 10, 11).

Creatinine is a nitrogenous product, not formed from food, but resulting exclusively from the breaking down of the tissues. There are different views about the formation of creatinine. The suggestion that creatinine is formed in the body from guanidine at a constant rate and then hydrolyzed into creatine which in return is stored in the muscles, seems to be correct. When the muscles become saturated with creatine, the excess of creatinine is excreted in the urine at a constant rate of 1.5-1.8 grams per 24 hours. The normal range of creatinine in blood is from 1-2 mg. per 100 cc. The rise of creatinine in blood as well as the rise of the constant rate of excretion in the urine gives us an estimate of the rate at which the tissues are breaking down in diseases. Creatinine values over 2 mg. per 100 cc. of blood are indicative of impairment of renal function, values over 3-5 mg. indicate a grave condition with some rare exceptions.

Although the degree of retention of creatinine and urea in grave kidney diseases often run parallel, this is not always true, because creatinine is exclusively of endogenous origin while urea is of endogenous as well as of exogenous origin (derived from food).

Before closing the discussion of N.P.N., reference may be made to uric acid nitrogen. Whenever a case in question does not present findings of nephritis but shows an increase in uric acid nitrogen, the attention must at once be turned to a possible diagnosis of gout. Since in gout, uric acid alone is increased while all the other non-protein nitrogenous components remain at normal levels.

Referring to Table I, 11, you will note other conditions in which an increase of uric acid may be found.

In consideration of a case as a good or bad surgical risk, the following values should be kept in mind: 60 mg. or more of N.P.N. per 100 cc. of blood are considered a pure surgical risk, while values over 100 mg. contra-indicate surgery.

Indican: Table I, 12. Among the reactions brought about by intestinal bacteria the most important one is the attack on the molecules of tyrosine and tryptophane. The bacteria split off portions of the side chains of these amino-acids and the residual substances still containing the ring are no longer oxidized in the body. The result is the formation of phenol and cresol from tyrosine and indoxyl from tryptophane. Phenol, cresol and indoxyl are too poisonous to be allowed to pass into the systemic circulation. Absorbed from the alimentary canal they reach the liver where they are coupled with sulphuric acid, forming ethereal sulphates. The ethereal sulphates (in this case indoxyl-sulphate) are much less poisonous and can be carried in the blood without harm until they get to the kidney to be excreted. The amount of indican gives us information about the extent of bacterial decomposition in the alimentary canal.

The normal amount of indican in blood, as has been shown in our work, is 0.05-0.20 mg. per 100 cc. An excess retention of this substance indicates a pathological condition.

The determination of indican in the blood is of clinical importance in the early as well as in the late stages of nephritis. It is especially of significance in the early stages because in early stages the total N.P.N. and urea N. may still be within normal limits. If in the later stages repeated determinations of indican show a constant high level or an increase (2-4 mg.) the danger of death is imminent.

Sugar: Table I, 13. The digested carbohydrates of the food are absorbed in the form of monosaccharides (assimilable glucose) and are carried to the liver where through the action of an enzyme called glyconase, they are converted into the polysaccharide glycogen. Glycogen, or animal starch, is deposited in the liver cells in the form of granules. The stored animal starch is then gradually hydrolyzed to glucose as the percentage of the sugar in the blood falls below normal, thus keeping the sugar at a constant level. A part of the absorbed carbohydrates may give rise to fat and be stored in this form. Another part is stored in the form of glycogen in the muscles. These reserves in the muscles are quickly hydrolyzed to glucose and then transported to places where the fuel is required; in other words, where they are utilized for obtaining energy in the moment of muscle contraction.

The act of contraction does not involve an oxidation of fuel; it is, therefore, not accompanied by the formation of carbon dioxide. As a result of contraction, lactic acid is produced.

The accumulation of lactic acid in the muscles is associated with the appearance of fatigue. If oxygen be admitted to the muscle after contraction, lactic acid disappears and CO_2 is produced. Excessive excretion of lactic acid in urine takes place in eclampsia, pernicious vomiting of pregnancy, acute yellow atrophy of the liver, and other conditions associated with severe injury to the liver. A possible further step in oxidation of lactic acid is pyruvic acid which is converted into acetaldehyde. This acetaldehyde is then oxidized to acetic acid, diacetic acid and finally to carbon dioxide and water.

The most important type of disturbed sugar metabolism is diabetes mellitus. The normal concentration of glucose in the blood is 90-120 mg. per 100 cc. at which level practically no sugar appears in the urine; but if the concentration is increased above this threshold the kidney cannot retain it. In some cases of kidney damage the sugar is allowed to escape even if the sugar is within or below the normal threshold in the blood. On the other hand when much sugar is eaten it so swamps the liver that it cannot be converted into glycogen quickly enough and therefore, the sugar content of the blood rises above the normal level and appears in the urine (alimentary glycosuria).

In diabetes mellitus the changes seem to center about a dysfunction of the pancreas, in particular of its inner secretory part, the islands of Langerhans. The secretion of these islands determines the burning up of the glucose in the tissues. If the secretory activity of the islands is diminished the tissues no longer have the power of using glucose as a fuel, the result being the accumulation of excess sugar in the tissues and blood and the excretion of sugar through the kidneys.

If the stored glycogen has been used up and the tissue proteins begin to break down the keto-acids derived from them may be used as a source of glucose. On the other hand when sugar is not being oxidized the oxidation of fats is also interfered with and becomes incomplete. Instead of being burnt up to CO_2 and H_2O the fatty acids give rise to the formation of poisoning substances such as acetone, aceto acetic acid and B-oxybutyric acid which are responsible for the depletion of alkali reserve and lead, therefore, to acidosis.

Hyperglycemia also is frequently found in nephritis, hyperthyroidism, pancreatitis and some infections while hypoglycemia is observed in hypo-function of the thyroid, adrenal, pituitary glands, after overdose of insulin and in cases of tumors of the islands of Langerhans.

When blood determinations show a high retention of nitrogenous products, high value for sugar and a low CO_2 combining power, surgical intervention is not advisable.

Cholesterol: Table I, 14. The lipoids such as lecithin and cholesterol are intimately associated with the metabolism of the neutral fats. *Lecithin* is present in practically all the cells and tissues, and in blood and it is increased especially in Niemann-Pick disease. It consists of one molecule glycerol, one each of stearic and oleic acids and phosphoric acid and one molecule of a basic substance called choline. As lecithin contains phosphorus it is a phospholipin. The task of phospholipines is to make the framework which supports the protein constituents of cell protoplasm. It is able to do this because it is a hydrophobic colloid and does not mix with the cell protoplasm. *Cholesterol* is the chief member of a group of substances named sterols, isolated from various plant and animal tissues. Because of its widespread occurrence in bile it received its name cholesterol. It combines with glucosides such as digitonin, saponin and with other hemolytic substances as bile acids, neutralizing their toxic action and protecting the blood corpuscles. It has, therefore, a therapeutic value in hemoglobinuria and anemia. It checks the action of lipolytic enzymes protecting the lipins of the cell from digestion. As a constituent of bile, it helps in the absorption of fats from the intestines, as a constituent of sebum of the skin, it protects the epidermal structures. It plays also an important part in the Wassermann reaction. It differs from fats and lecithin in not being hydrolysed when heated with alkalis. Its normal range in blood is 140-200 mg. Increased cholesterol is found in lipoid nephrosis, cholelithiasis, pregnancy, xanthomatosis, in

diabetes with acidosis and some cases of carcinoma. Its range is decreased in pernicious anemia, acute infectious diseases (Pneumonia), in prolonged starvations and in wasting diseases (Addison's disease and severe cases of exophthalmic goiter).

Icterus Index: Table I, 18. The blood normally contains bilirubin in the amount of about 1 gr. to 200,000 liters of blood. This ratio is called the icterus index. The normal icterus index varies from 4-6.

The icterus index determines the bilirubin content of the blood. The actual ratio of bilirubin in the blood is estimated by the use of a standard solution of $K_2Cr_2O_7$ (1:10,000).

In cases of severe icterus the index may rise to above 200. If bile is suspected in the blood a Van Den Bergh test should be performed before making the quantitative determination since the Van Den Bergh test permits the differentiation between obstructive and hemolytic jaundice. If the untreated serum gives with Ehrlich's reagent an aldehyde reaction, this indicates an obstructive jaundice (direct reaction). If the reaction occurs only after precipitating the serum with conc. alcohol, it indicates a hemolytic jaundice (indirect reaction).

Ca Potassium—NaCl: Table I, 15, 16. Life processes in tissues have been found by Ringer to be dependent on the concentration of the inorganic ions with which they are in contact and particularly of the ions of sodium, calcium and potassium. A solution containing sodium chloride, calcium and potassium in such proportions that their antagonistic tendencies are suitably balanced provides the best environment for the function of the heart muscle and of the other tissues. Such an optimal balanced salt-solution is the blood.

Ringer made the interesting observation that the calcium of his perfusion fluid could be replaced by an equivalent amount of strontium in maintaining the heart beat. It seems therefore, to be evident that it is not the calcium which is necessary to the tissue but that it is the effect of some property common to the Ca and Strontium ions which is required for the maintenance of normal activity. The low content of calcium associated with tetany is not due to an insufficient supply of calcium but to an abnormal relation between the blood calcium and the permeability of the gastrointestinal tract. With low calcium values this permeability is increased, leading to the entrance of proteinogenic toxins into the blood stream which toxins are held responsible for the production of the symptoms of tetany.

Phosphorus: The normal range is 2-5 mg. per 100 cc. The amount of inorganic phosphate is lowered in rickets. A low content of phosphorus hinders a proper calcification of the bones.

Chlorides: Sodium and potassium are the most abundant inorganic ions in the blood. To a great extent they unite with chloride, bicarbonate and phosphate for holding the proteins in solution. The potassium salts are present in the red corpuscles and the sodium salts occur as well in the red cells as in the blood plasma.

Bromberg (Journ. d'Urol. 1914, IV-733) has shown that the amount of sodium chloride of the urine is twice as large as the amount of sodium chloride contained in the blood plasma of normal persons. This relation of 1:2 is called "Hemorenal index." Variations of this index, he believes are the first indications of renal insufficiency.

The normal value of chlorides from the whole blood is 450-500 mg. and for the plasma 560-600 mg. per 100 cc.

Blood chlorides are increased in anemias, nephritis, in certain cardiac conditions and in prostatic obstructions. The determination in these cases aids in deciding whether a salt free or a salt modified diet should be ordered to restore the chloride value to normal. A decrease of chlorides is noticed in diabetes, in fevers and in toxemias which are frequently associated with disturbances of the gastrointestinal tract. A fall in chlorids is further noticed in disturbances of the gastrointestinal motility, in peritonitis, in strenuous vomiting and tends to be associated with a rise of N. P. N. and a severely toxic alkalosis, caused by a rise of the carbondioxide combining power. It seems to be advisable in these cases to order not only a chloride estimation but also a N. P. N. and CO_2 combining power determination.

CO_2 Combining Power: Table I, 19. As long as the amount of the alkalies (Sodium bicarbonate, dipotassium phosphate and the alkalies of protein) present in the blood and known as the "alkali reserve" is sufficient to secure the faintly alkaline reaction of

blood and to maintain the hydrogen-ion concentration at a fairly constant level ($pH_{7.3}$-$pH_{7.5}$) the CO_2 capacity of plasma per 100 cc. fluctuates between 75 and 53 volume per cent.

Due to the formation of excessive amounts of acid substances in a disturbed metabolism the CO_2 combining power of the plasma and the pH value may become markedly diminished. This state constitutes "acidosis" and the degree of the alkali-reserve is, therefore, a direct index of the degree of the acidosis. When the reading by the Van Slyke method is less than 53 volume per cent. it signifies an increase of carbonic acid in proportion to NaH CO_3 present in the blood. The patient is, therefore, inclined to acidosis. If the reading is more than 75 volume per cent, it signifies the reverse that is, an increase of NaH CO_3 in proportion to carbonic acid and the patient begins suffering from "alkalosis."

A mild acidosis shows a CO_2 capacity of 53-40 volume per cent.

A moderate acidosis shows a CO_2 capacity of 40-30 Vol. per cent.

Symptoms of a severe acidosis are shown below 30 Vol. per cent.

Acidosis may occur in cases of 1. excessive formation of acetone bodies (oxybutyric acid and diacetic acid) in advanced stages of diabetes mellitus; 2. excessive retention of lactic acid in cases of pregnancy and in incomplete pulmonary aeration due to pathologic conditions of the lungs. Acidosis due to formation of lactic acid may also follow an anesthesia. 3. In cases of an excessive decomposition of proteins and formation of keto-acids in severe fevers; 4. in cases of an excessive retention of inorganic acids (acid phosphates) due to a defective elimination of acids by the kidneys as in nephritis; 5. in cases where a considerable loss of alkali takes place as in severe diarrheas.

A preliminary determination of the hydrogen-ion concentration of the blood serum serves to recognize the presence of an acidosis which has not been compensated by pulmonary activity in removing CO_2 or has been caused by a defective neutralization of the retained acids.

A condition opposite to acidosis but quite as serious in its effects upon the body is "Alkalosis." Alkalosis may occur 1. as the result of an excessive removal of carbonic acid by way of the lungs (psychic disturbances, excessive crying); 2. by excessive loss of hydrochloric acid and sodium chloride in strenuous vomiting in which cases the blood is left with a deficiency of chlorides and an excess of bicarbonate; 3. by excessive intake or administration of alkalies in treatment of acidosis, by overdosage of calcium or sodium carbonate in the Sippy treatment of peptic ulcer particularly when renal function is impaired; 4. alkalosis appears also in toxic conditions of pyloric obstruction and other disturbances of the gastrointestinal motility which are often associated with tetany.

SUMMARY

1. The normal and pathological ranges of the extractive and mineral blood constituents are seen in Table I.

2. The interpretations of formation and retention of these substances in the blood are given in the discussion.

3. The determinations that are advisable in special cases of diseases are indicated in Table II. The determinations are listed by numbers according to rank of importance.

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SOME USES OF PICRATOL WITH SPECIAL REFERENCE TO CHRONIC OTITIS MEDIA

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My reason for presenting this article to the profession is to bring to its attention what seems to be a more satisfactory antiseptic for certain things, especially for the treatment of otitis media, of the chronic non-specific type, than we have had heretofore, and perchance to stimulate interest in its use by others, some of whom, being ear specialists, can more quickly obtain data on a series of cases large enough to be of certain value in determining the merits of this treatment.

So far as I am able to learn, this antiseptic, picratol, has not been used in the treatment of otitis media before. At least, I can find no references to it in the literature and one of our foremost ear specialists in this city apparently not only had never known of its being used in treating otitis media but was not even familiar with the name of the drug.

That, however, is not surprising when we realize that the company that manufactures it sells it only in the form of suppositories for urethral and vaginal treatment. Whether the research department of this company has ever advocated or experimented with its use other than in suppositories I am unable to say, except that I understood from the advertising material the company sends to physicians that the drug is put on the market only in these two suppository forms.

The chemistry of picratol is of interest, and, by comparison, gives an idea what to expect of it in biological or therapeutic uses. The following chemical data was very kindly furnished me by John C. Bird of the department of research of John Wyeth & Brother. Picratol is the silver salt of picric acid, or silver trinitrophenolate, with the formula C_6H_2 (O Ag) $(N\ O_2)_3$. A saturated aqueous solution of picratol at room temperature is approximately 1% in strength and has a bright yellow color, as have the glistening flake-like crystals themselves. The solution stains skin and mucous membrane bright yellow. The crystals burn readily, possess a bitter taste, and a very slight disagreeable odor. The dust is somewhat irritating to the respiratory passages. This is not true of the aqueous solution, which does not irritate the respiratory mucous membrane and has scarcely enough odor to be detected. Picratol contains about 30% of its weight of silver. It ionizes to some extent in aqueous solution, giving a silver cation and a trinitrophenolate anion. So in the solution we have mainly the silver trinitrophenolate molecules, some silver cations, some trinitrophenolate anions, and some picric acid molecules.

Theoretically, therefore, we might expect some biological action from any or all these constituents. We might expect the antiseptic results that silver salts usually possess; and, also, the picric acid effects which are antiseptic and inimical to the growth of excessive granulation tissue as is seen in the picric acid treatment of burns, and a stimulatory effect on epithelial cells which would help greatly in the closure of perforations of the tympanic membrane.

A black precipitate of silver forms in the aqueous solution of picratol on long standing and, hence, it should be prepared in small quantities so that it does not stand too long before it is used.

The above mentioned constituents and properties of picratol, I believe, are the reasons for the apparently superior results mentioned herein, and should prove to hold true in a large series of cases if painstaking care is used in applying the treatment which I shall herein describe in detail. And I predict that the most favorable results will be obtained in those cases of otitis media in which there is a tendency to the production and recurrence of granulations in the ear, and which granulations are, to a large extent, the cause of the chronicity of the disease.

Let us consider a few specific instances in which it was used and set down a detailed description of each case and its management.

C. B., Jr., about 17 or 18 years of age, was seen at his home the latter part of March, 1930. He complained of general malaise, nausea, vomiting, and had fainted that morning. He said he had a "cold in his head" and that his right ear had been discharging pus nearly all the time since the latter part of 1926. The left ear had begun to discharge soon after the right one started. He had had several long series of treatments by two different well known E. E. N. & T. specialists. Treatments were given two and three times a week. Once or twice the discharge seemed to be entirely cleared up but would start again shortly after

the treatments were stopped. About January, 1929, a radical mastoid operation was done on the left side by one of the E. E. N. & T. specialists. A left sided facial paralysis was present after the operation and has remained permanently with only slight or no improvement, although massage and electrical treatments were used for many months afterward.

The left ear healed entirely but complete loss of hearing was present. Later the purulent discharge recurred slightly and both ears continued to discharge with only short intervals of quiescence occasionally. The left ear was not discharging at the time I saw him. The physical findings were as follows.

Temperature 99.2. Purulent discharge draining from the right ear. Hearing in right ear poor. Medial end of left external auditory canal seemed to be filled with scar tissue. No tympanic membrane in sight. No discharge from left ear. No hearing in left ear. Left sided facial paralysis present. Healed scar of left mastoidectomy present. Nasal mucosa subacutely inflamed in both nares. Muco-purulent discharge present in both nares. The colon was tender and spastic. X-ray examination a few days later revealed a "chronic, destructive, infectious process involving the right mastoid region"; "absence of all septal partitions"; "hyperplastic involvement at region of periantral cells". Also a large mucocele arising from the floor of each maxillary sinus and slight amount of fluid in the left maxillary sinus.

The tonsils had been removed. The patient was somewhat under weight and slightly anemic. Smears and cultures made from the right ear revealed staphylococci. Otherwise, the history and physical findings were irrelevant. The management of the case was as follows. Appropriate diet and treatment for chronic spastic colitis was begun.

General and local treatment for the rhinitis and sinusitis were carried out, including several irrigations of the maxillary sinuses.

Details of these measures will not be given here because of space needed and because they are not in line with the points I wish mainly to bring out.

An autogenous vaccine was made from the staphylococci cultures from the ear and increasing doses of this were given hypodermically every second or third day until about twelve doses had been given, the last several doses being about 2 c.c. each.

The right ear was treated two and three times per week from about the first of April, 1930, till June 12, 1930. Many times the small central perforation in the right tympanic membrane, exposing the manubrium of the malleus to direct view, was enlarged by making an incision downward and backward from its lower posterior margin to facilitate drainage and irrigation of the middle ear with the various antiseptics in general use in middle ear disease, including solutions of argyrol, silver nucleinate, hexylresorcinol, hydrogen peroxide, alcohol, boric acid and mercurochrome. No marked change was seen in the amount or character of the discharge during the ten weeks of treatment. The tympanic membrane continued to be thickened and hyperemic, with a slight tendency to the growth of granulation tissue on its medial surface, and about the margins of the perforation.

I was continually in search of something that would give better results. So, reasoning that picratol in an aqueous solution might be a good antiseptic as well as a good agent to inhibit the growth of granulation tissue, I decided to try an aqueous solution of picratol in this ear. Accordingly, I obtained a small supply of the crystals.

I used it in ½ to 1% aqueous solution, and irrigated the middle ear with a small calibre canula through an otoscope, keeping the end of the canula under direct observation at all times. The canula was inserted through the perforation in the tympanic membrane and the solution slowly forced into the middle ear by gentle pressure on the syringe bulb. The excess of solution returned into the external ear through the drum perforation. A small amount usually passed into the nasopharynx through the Eustachian tube. This was sometimes repeated several times at a sitting, the external auditory canal being swabbed out before each irrigation so the canula could be seen and guided under direct vision. The middle ear and part of the external auditory canal were filled with the solution and the patient kept lying on the opposite side for ten to fifteen minutes after the last instillation. Then a cotton plug was inserted and the patient allowed to go, having been instructed to remove the cotton later. Treatments were repeated every second, third, or fourth day, depending on the amount of discharge. The patient was given some of the picratol solution and instructed to put several drops in the ear once daily on the days he did not come to the office for treatment and to lie on the opposite side for ten minutes following his instillation to allow the medicine to run into the middle ear if possible. The patient was told to have some one at his home cleanse his ear canal first by putting a little hydrogen peroxide into it, allowing it to effervesce, mopping it out with a cotton swab, then repeating this several times until the canal was free of pus and dry. Or, he was told to irrigate the external canal with boric acid solution after using the hydrogen peroxide, then dry the canal. This method of cleansing the external auditory canal and the middle ear cavity of pus and mucus was used at the office also except when wiping with a dry cotton applicator seemed to cleanse it sufficiently.

On some occasions the ear was cleansed with peroxide and boric acid, and then the picratol solution was instilled and allowed to remain with no repeated irrigations. In cases which have a large perforation in the ear drum or in which a long incision has been made in the membrane the irrigating solutions will go into the middle ear and cleanse it sufficiently without carrying the end of the canula into the middle ear cavity. The external auditory canal and the middle ear should always be dried well before the picratol solution is instilled.

This patient received four treatments with the picratol solution, then wanted to discontinue them because he had a chance to go to Georgia on a two weeks' vacation trip. I told him to go ahead and return to

me when he came home and we would continue the treatments then.

When he came again in a little less than three weeks he said the ear had ceased discharging soon after he arrived in the South and had remained dry. On examination I found the ear dry and the perforation completely closed. And thus it has remained to this day which is over two years after the treatments were given. His hearing in this ear improved very much since the ear healed. After the first treatment with picratol there was less discharge when he returned. This was not given much consideration because the amount of discharge had varied considerably before. After the second treatment the discharge had not decreased in amount when he returned but contained a much higher percentage of mucus and lower percentage of pus. The next observation showed very little if any change. Then he was not seen again until three weeks later when the ear was dry and healed.

This seemingly wonderful result was not credited to the treatment much because it was thought that being in the hot dry climate of Georgia may have been a very large factor in the healing.

A second case, E. B., female, 6 years old, was brought to me October 10, 1931, with a purulent discharge from both ears which had been present for seven months and the following history was obtained. About seven months ago the child became irritable, had a poor appetite, was under weight and pale, and began to have a purulent discharge from both ears without having complained of ear ache. The mother noticed the material on the child's pillow and thus traced its source to her ears. She was immediately taken to an ear specialist, and so for the past seven months she had been continuously under an ear specialist's care. Three different well known E. E. N. and T. men had treated the ears two and three times a week. About five months ago the child's tonsils and adenoids were removed. It was hoped this would help stop the ear trouble. About that time, also, an excessive growth of granulation tissue was removed from each ear. This reformed in spite of continued treatments. The child was also on general supportive treatment in the form of cod liver oil, much exposure to sunshine when possible, guarded exercise, etc. During this regime she had improved slightly in her appetite, disposition and weight, and was not so pale as at first, the mother stated. At this time the child's parents were almost hopeless of getting any results by having the ears treated, as there had been no improvement in the seven months of constant treatment. Also, the financial drain of these treatments, together with the results of business depression, was making it almost impossible for them to continue the treatments, especially when no improvement was in sight.

Consequently, they wanted me to look at the ears and tell them whether I thought it would be safe to discontinue all ear treatments and just cleanse the ears at home and hope that they would some day heal through Nature's own efforts.

On examination I found thick green-yellow-gray pus in both ears, there being more in the right ear than in the left. After wiping the pus out of the external auditory canals I saw a large perforation in the lower posterior quadrant of the right tympanic membrane, the entire quadrant or more being destroyed. The margins of the remaining portion of the drum were very thick, hyperemic, and lobulated due to excessive granulation tissue growth on the drum and in the middle ear cavity. The left tympanic membrane was hyperemic and apparently thickened, but no perforation could be seen. It was concluded that the perforation in this drum must be small and in the anterior part because that was the only part that could not be seen, due to the curved course of the external auditory canal. No granulation tissue was seen in this ear.

The mucous membrane of the nasal passages was hyperemic and tumescent. There was some muco-purulent discharge in each naris.

The rest of the history and physical findings have little or no bearing on the conditions to be discussed herein.

So I told the parents that I thought it best that some doctor see the child once every week or two, at least, if they could not continue the regular treatments.

I later told them of the case I had treated with this new remedy as described above and of the results; and, that I did not know whether their child would be benefited similarly by it or not but if they decided to try it to come back later. Two weeks later they returned with the child and wanted to give this new antiseptic a trial.

At this time it was seen that the granulation tissue had increased in the right ear, and the left ear showed small amount of pus but no granulation tissue in sight I gave the parents some of the picratol solution and instructed them to cleanse the ear canals with hydrogen peroxide and boric acid solution twice a day and to instill a few drops of the picratol solution afterward once a day. When they returned one week later the granulations had increased in the right ear and a clump of granulation tissue was showing up in the anterior part of the left external auditory canal just outside the drum. The purulent discharge had increased in each ear. I saw that nothing would be accomplished unless the granulations were removed. They were becoming so extensive that I deemed it best to take the child to a hospital and remove them thoroughly at one sitting under a general anesthetic. After one more week of care at home with no improvement and an increase in the granulation and deafness the parents were willing that this be done. On November 11, 1931, under nitrous oxide anesthesia part of the granulations in the right ear were plucked away with ear forceps. But the base or bases from which they grew seemed so wide and

scattered that this was not successful. They seemed to have eroded away much more of the tympanic membrane. So the electro-coagulating current was applied to them by touching the electrode to the forceps while it grasped the tissue. This was done as extensively as I dared to do it and not destroy the normal contents of the middle ear. I was able to extract much more of the tissue after it had been electro-coagulated. The tympanic membrane was found to be half destroyed by the encroachment of the granulation tissue.

Into the left ear, a small cotton applicator was inserted and twisted a bit and the entire clump of granulation tissue about 2½ mm. in diameter came out. It apparently had a narrow pedicle which broke easily. I could not locate the base of the pedicle or the perforation in the drum. They could only have been at the extreme anterior lower margin of the drum for that was the only part that could not be seen.

I deemed it wise to make a long incision in this drum to get a large opening for better drainage, irrigation, and instillation of the picratol. Therefore, a long incision was made in the posterior portion of the drum and then both middle ear cavities were thoroughly irrigated with boric acid and then dried and filled with picratol solution.

I then treated the ears every second day as I have described above and the mother treated them on the intervening days as I had instructed her to do. As the discharge decreased I increased the interval between my treatments.

In two and one-half weeks from the time of this operation the left ear was entirely free of discharge and granulations and the membrane was completely healed.

The right ear produced a profuse watery discharge for several days following the electro-coagulation, which gradually decreased and changed to a thick purulent discharge again. This gradually decreased in amount. After the coagulated granulation tissue had sloughed off a very small amount of granulations were found at the base. These were touched three or four times with solid silver nitrate and this completed their destruction. They showed no more tendency to grow. In five weeks from the time of operation the left ear was completely dry and free of granulations and the wide perforation of the drum was completely bridged across. Both ears have remained well to this day which is nearly a year from the time they became healed.

The child's hearing is practically normal in both ears. No extremely delicate test was made of her hearing but ordinary tests with spoken and whispered words showed hearing of a normal average acuity.

A third case of chronic otitis media of four year's standing will be mentioned, although it is hardly a fair test case.

Mrs. M. H., 24 years of age, came to me because of a purulent discharge from the right ear on December 7, 1931. About ten days before this the ear became very painful. It soon began discharging profusely but had almost ceased discharging when I saw her. Examination revealed a large elliptical perforation in the lower posterior quadrant of the right tympanic membrane, a small amount of muco-purulent discharge exuding through the perforation. There were no granulations. I had taken care of this patient for several months preceding this visit for several other illnesses including prenatal obstetrical care and delivery of the baby, which was her fourth child, spastic colitis, recurrent exacerbations of chronic pyelitis and ureteritis mainly on the right side, cystitis, urethritis, retroverted uterus, mild chronic bilateral saplingitis, chronic appendicitis, endocervicitis with cervical erosion and profuse vaginal discharge, hemorrhoids, frequent colds often with sinus involvement, anemia, etc. So it is very evident that she was in poor health generally and had been so for a long while. Furthermore, she was one of the county's charity cases and did not get proper food or care at home. In fact many times she and her family were almost without food from one to three days at a time. She could neither buy medicine if it were prescribed nor pay street car fare to come to my office regularly for treatments. Other things that interrupted my care of this ear condition were recurrent furunculosis in both external auditory canals during which times the canal was swollen shut or nearly so thus making treatment of the middle ear impossible; and an operation upon this patient at which time the following procedures were done. The cervical canal and the eroded area on the cervix and a nabothian cyst were electro-coagulated; a perineorrhaphy was done; also, a hemorrhoidectomy; an appendectomy; a supravaginal hysterectomy was performed, the right ovary and both Fallopian tubes being removed with the uterus, which was large and boggy, because of replacement of the right ovary by an oval cyst, which measured about nine by seven by seven centimeters, and the tubes were slightly thickened and hyperemic. There was also a small fibroid on the left round ligament at its junction with the uterus. The left ovary was not removed although it was filled with small retention cysts. The appendix was bound down by a band of adhesions across its middle portion. Two nevi were excised from the skin, also. She recovered from these procedures uneventfully with the exception of a slight flare up of her pyelitis two weeks after the operation.

There have been signs and symptoms at times which would indicate that her right mastoid cells harbor a chronic infection also. I have never been able to get an x-ray picture of her mastoids and sinuses due to her lack of finances.

About six weeks ago she had a severe attack of the urinary tract infection and showed blood in her urine for the first time. I was unable to induce her to go into the county hospital for care, observation, and diagnosis; and lack of finances prevented her from going into any other hospital.

A few days ago she returned to the office with a severe subacute rhinitis and apparently involvement of the maxillary and frontal and ethmoidal sinuses. The cold started about four weeks ago she said, and was still quite bad, and both ears were discharging slightly.

So it is evident that she has been in ill health most

of the time due to various pathological processes, all of which made her resistance low and the chance of curing her otitis media less. This had been treated four years ago at the time it started by an E. E. N. & T. specialist for a few months with no improvement; and again, shortly afterward at one of our best ear clinics for several months with no improvement. She was told at this clinic by the doctor in charge that she had a tuberculous infection in her ear and it would be impossible to cure it.

Smears of the pus from her ear showed pus cells, mucus, abundant staphylococci, and an occasional unidentified slender bacillus a few of which were slightly clubbed and beaded and all of which were Gram positive and non-acid-fast in staining qualities. Of course, the patient could not pay to have further bacteriological study made to identify this organism or guinea pig tests for tuberculous infection.

So I repeat that this case is hardly a fair test case. I might add that by treating her ear as I have indicated in the other cases the discharge ceased completely for seven weeks one time and five weeks another time. Previous to this treatment it had never remained dry more than one, two or perhaps three weeks at a time, the patient stated. If one could treat it regularly and persistently every second day, and perhaps facilitate drainage and irrigation by enlarging the perforation in the drum by incising both upward and downward from the perforation a permanent cure might be accomplished in this case. On the other hand, the condition in her nasal passages and sinuses and mastoid, as well as the more remote pathology in the urinary tract might require complete healing before the otitis media could be permanently cured.

Concerning other uses of the aqueous solution of picratol, suffice it to say here that I have used it in several cases of acute suppurative otitis media where drainage through the tympanic membrane had been established spontaneously or by paracentesis with uniformly good results, complete healing, cessation of suppuration, and closure of the perforation in the drum in every case.

I have used it with very favorable results for post-operative treatments in a turbinectomy case by putting a gauze pack dripping wet with the picratol solution into the nose and allowing it to remain about twenty minutes. Theoretically considered, it should prove very satisfactory for this as well as middle ear work.

I have also used picratol in aqueous solution in other conditions with satisfying results but I shall not take space here to mention them. They may be embodied in a later report.

The one main disadvantage of picratol solution when used for ear and nose work is its bitter, disagreeable taste noticed by the patient when some of it runs down into the pharynx through the Eustachian tube or through the posterior nasal passageway. Adults do not mind it but children dislike it very much.

In final comment I wish to emphasize the following points. I have stated clearly that these patients were treated for long periods of time by well known E. E. N. & T. men to show that these patients must have had good treatment, the best that is known today, and that it was not because they had had poor treatment that they did not get well before I saw them.

Also, it is my aim and hope by publishing this paper to stimulate enough interest in this drug to get other physicians, especially E. E. N. & T. specialists, to try it, for they could much more quickly accumulate data on a series of cases large enough to be of real value in determining whether this treatment is of special merit. And I believe all would gladly welcome any sort of treatment that would prove to have more beneficial effect on chronic otitis media than the drugs that are now used for it. I hope we may soon see and hear further reports from others after they have tried picratol in aqueous solution, for it is evident that these few cases I have reported herein are not enough on which to draw any conclusions except that the treatment certainly deserves further trial.

4770 Lincoln Avenue.

ANOTHER FISH STORY

"How many fish was it that you said you caught Saturday, Ernest?"

"There were six of them dear. Don't you remember?"

"Yes, that was what I thought you said, but that fish market has made a mistake again. They've charged us for eight."

She: "It's nearly six weeks since baby was born. Have you told the registrar yet?"

He: "If the registrar lives anywhere within ten miles' distance he'll know already."

ARGYRIA

Associated with a heretofore unreported colloidal silver preparation

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It has been established that colloidal silver preparations may cause argyria. Argyrol, collargol, and protargol are the only colloidal silver preparations reported[1] to be associated with this condition. The only reason for publishing the following case is because of its being associated with a preparation heretofore unreported.

During the past ten years the *Quarterly Cumulative Index* has not included a report of argyria associated with neosilvol administration. Neosilvol was first put on the market in 1921 and has since been put into widespread clinical use. The following report may lead to the habit of a word of caution being given to the patient lest he think he may use a silver preparation indefinitely and in any quantity.

Case 1. Man S. C. K., aged 49 years. History of head colds and sinusitis for years. Frequent antrum irrigations had cleared up his sinusitis but congestion of nasal mucous membrane persisted. On September 26, 1927, the patient went to his nose and throat doctor for the nasal condition and received the following prescription:

Antipyrine .....Gr. XI.
Neosilvol .....Gr. L.
Aqua qs ad.....Oz. I.
M. et Sig. One drop in nose with eye dropper.

This medication relieved the patient of his difficulty in breathing through his nose, but the condition returned when the medication was stopped for a few days. On resumption of the treatment it was found that several drops were better than one and so the patient established the habit of a few drops in each nostril twice a day and continued this practically every day since September 26, 1927. On close questioning it was found that the patient used about a half dropperful (approximately 6 to 8 minims) in each nostril twice a day. Some ran out of the nose and some ran back into the nasopharynx and was expectorated. However, much of the time it was swallowed. He had the prescription refilled many times—so often that he got it filled in 6-ounce and later in 16-ounce bottles. On rough estimation, I have calculated that the patient used 200 to 300 grams of neosilvol in the past three and one-half years.

I first saw the patient in September, 1930, for a cold and marked fatigue. At that time his face seemed to be of a slate grey color. His sister informed me that he had been using the above white medicine in his nose every day for years. He was advised to discontinue the use of these drops. Recovery from the cold was prompt, but fatigue persisted. Several abscessed teeth were removed and the fatigue disappeared. Subsequent examination in October, 1930, disclosed a rather dusky countenance.

In February, 1931, the patient was seen following an attack of food poisoning with vomiting and diarrhea. At this time his face was ashen grey on a rather pale background. He had continued the use of the drops in his nose since he was uncomfortable without them. At this time the patient was told of further sequelae to the continued use of this prescription and was emphatically urged to discontinue its use. An ephedrine-containing ointment was supplied to replace the drops.

Subsequent examination March 3, 1931, revealed a definite slate color of the patient's entire head and face above the collar line. This was not so marked as when observed with the pallor of his face induced by the vasomotor reaction accompanying his food poisoning. His body and hands were not discolored. The nasal and pharyngeal mucosa were not discolored. The teeth were dark but otherwise normal and the gums were normally pink. The slate grey color of the head was still present September 15, 1932.

CONCLUSION

A word of caution should be given with the prescribing of all silver-containing preparations so that the patient will not be in danger of developing argyria. It should be noted that the dosage used by this patient was far in excess of that prescribed by his physician.

122 So. Michigan Ave.

1. Myers, C. N.: "Argyria and its Relation to Silver Therapy." *American Journal of Syphilis*, 7:125, January, 1923.

INCIDENCE OF PULMONARY TUBERCULOSIS AMONG STUDENTS IN NURSES' TRAINING SCHOOLS*

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In 1928, Wipperman sought explanation of the untoward incidence of manifest tuberculosis developing in one of his student nurse classes (1926) of the Decatur and Macon County Hospital, Decatur, Illinois. The training school had been in operation for twelve years and the occurrence of tuberculosis among the student nurses had been of such infrequency as could be considered as bearing normal relationship to the prevailing general morbidity.

Out of an enrollment of 24 students in 1926, seven developed clinical tuberculosis during their training period, the majority of whom

*Read before the Annual Meeting of the Mississippi Valley Sanatorium Association, Indianapolis, September 13, 1932, by Dr. Robinson Bosworth, Medical Director and Superintendent, Rockford Municipal Tuberculosis Sanatorium, Rockford, Illinois.

presented effusive pleurisy as their initial symptom. No others of the group showed tuberculosis subsequent to graduation.

At a loss to account for an incidence rate of 29.1%, a rate substantially higher than reported up to that time by most observers, stereo-roentgenograms were made a physical examination requirement for the admission of students to training, seeking thereby to eliminate both active and inactive cases of parenchymal disease which might be present prior to enrollment. In 1930, the x-ray requirement was supplemented with the Mantoux intradermal tuberculin test. The Training School administration embarked upon a program designed to afford increased supervision and to provide for greater rest and recreation periods, thus seeking avoidance of unnecessary fatigue. Quite coincidently a large tuberculosis ward was closed and only sporadic admissions of open cases were thereafter made. On the other hand, two months or longer of training at the Macon County Tuberculosis Sanatorium, a policy since 1923, was continued with no change in prophylatic technique though every ordinary measure against massive infection had always been exercised—not to the point, of course, of extreme contagion hospital practice.

During the four years of investigation just concluded, 96 applicants were accepted for training as nurses of whom 74 are now in training or have completed their course within this period. Twenty-five of these entrants were negative reactors, all of whom are now allergic with the exception of nine who have not completed the first year of training. Geer, Minneapolis, has recently reported a similar mounting of the allergic incidence among student nurses reaching 84.6% at time of graduation. It must be conceded, therefore, that the majority of those reacting negatively on admission to training become positive reactors to tuberculin, some earlier and others more delayed.

No case of tuberculosis has developed in the 4-year period 1928-1932, with the exception of one who received probationary acceptance with a left upper lobe inactive lesion which became reactivated during her first year of training. Obviously then, since no case of tuberculosis occurred during the period when the tuberculin tests were routinely accomplished no report can be made on the relative incidence of the disease between allergic and non-allergic students. The point, however, is quite beyond dispute, Heinbeck in 1928, covering a period of study of five years among 420 entrants, finding the negative reactors to be 11 to 16 times more susceptible to the development of clinical tuberculosis than those reacting positively. In Geer's cases, too, it is recalled that five out of six of his nurses contracting the disease in training were negative reactors.

Myers points out that the Framingham retesting program with the finding of 25% fewer positive reactors, supports the view that first infection is now beginning to appear in adult life. The halving of the national death rate from tuberculosis since 1920 is of course the responsible factor.

The "no-incidence" rate for disease in the period under study has served to lower that for the 16 year period average to 7%, a figure now within the rates reported by Myers in 1931, namely 5—12%. During this time with a student enrollment of 387, of which number 208 completed training, 15 students have developed active tuberculosis either during or just subsequent to training.

In reviewing the literature, it is found that the same interest is being taken among medical school students as with the student nurse groups, this for the fact, probably, that the question of the degree of communicability is re-entering the picture at this time when they too have been found to have a tuberculosis rate well above the line of the general morbidity rate. Opie, McPhedran, and Hetherington, in the study of 450 medical students, have found a disease incidence of 4.1% among students of the first year of medical school and almost as high in incidence among premedical students. There have been no other vocational groups investigated that warrant comparative study excepting perhaps the work of Soper and Wilson among 3,000 students entering Yale University wherein he found only 0.6% of entrants showing active tuberculosis and 1.1% among 795 students in the graduate school. As far as other reports are concerned, the incidence is higher, in most studies, among medical than students of other professions or vocations. While communicability may be suspected as playing some role in

the medical student of advanced standing, it cannot be made to account for the above than general incidence in the premedical and first year medical school classes, members of which certainly see little or no service on the wards of general hospitals or contact cases of tuberculosis in special hospitals, diagnostically or otherwise.

Reverting back to a study of our own student nurse group with respect to the factor of communicability, the literature indicts more general hospitals, than special hospitals for the tuberculous, in the matter of numbers of nurses developing tuberculosis attending the sick in the two institutions. Sachs, in 1923, in a study involving 58 schools of nursing, reports that of 206 nurses showing clinical tuberculosis, 125 were graduates of general hospitals; 36 had not knowingly nursed tuberculous cases; and 43% gave a family history of the disease. General hospitals as a rule, have had, until recently, a phthisiophobia that instead of reacting to safeguard the attendants from massive exposure has resulted in their acceptance with hesitancy and without fullest thought in the matter of their care, prophylactic or otherwise.

If we are to grant that it was the diagnosed consumptive undergoing hospital care rather than the undiagnosed respiratory case on the wards that were providing serious infection to both allergic and non-allergic students, we have even better illustrated that a complete no-incidence rate may result from care in a special hospital for the tuberculous where adequate prophylactic measures are firmly carried out, but where strict contagion disease measures are considered not only unnecessary but as returning the public to such a state of phthisiophobia that early cases return "under cover." We feel that, though subscribing fully to the slogan that "Every Case Comes From Another," the halving of our national death rate from tuberculosis may not be charged to anything that we have done in the past with respect to the communicability of the disease but rather to the educational program of the National Tuberculosis Association in serving to bring the early case into the open.

If our experiences carried on with the joint cooperation of the General Hospital and the Specialized Hospital at Decatur teach us anything, in summary they must be:

1. The non-allergic student becomes allergic in most instances before completion of his study period.

2. General hospitals should accept open cases for definitive care but approaching the problem of prophylaxis and treatment on the same basis as standard special tuberculosis sanatoria.

3. The student nurse and the medical student have entered upon rigorous study programs which entail perhaps 50% greater fatigue over a period of years, developing as this undoubtedly does a lowered resistance curve. It is felt that in the case of the student nurse group at least, where they are residents under constant observation, no training standard need be sacrificed through the adoption of a program of general health supervision.

4. It must be agreed with Myers that while the non-allergic student nurse is more susceptible to the development of the disease, tuberculosis, we must adequately protect the allergic student as well.

5. Strict adherence to the prophylaxis as practiced in our representative sanatoria must be had. While theoretically ideal from the standpoint of infection itself the most elaborate contagion hospital practice is unnecessary in tuberculosis treatment when the safeguards already cited find consistent practice.

PROPHYLAXIS OF PROSTATISM

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The magnitude and immensity of preventive medicine can scarcely be appreciated and visualized by graduates of medicine of the immediate past few years. One needs to talk to an older colleague of a third of a century's experience to conceive somewhat of the magnificence of an altruistic profession's efforts to minimize the incidence of disease, its morbidity and mortality, its sequelae and economics.

One learns from such a communication that a third of one's practice of a generation since might easily be composed of typhoid fever at certain seasons. That with seasonal variations a goodly percentage was always composed of the acute infectious diseases, such as typhoid,

diphtheria, scarlet fever, etc.; diseases which are more striking by their absence or occasional occurrence at the present time. No other body or profession has made so valiant and united attempt (and to such an extent successfully) to help their fellow beings at the expense of their very livelihood. This is as it should be, and no relaxation in the furtherance of such a laudable endeavor can be entertained. We are justly proud of so enviable a record for our profession in the elimination of untold suffering, the loss of time and life, as well as monies saved.

The magnitude and importance of the work accomplished cannot be fully realized or conceived, and it is equally important that the profession be not satisfied to rest on its laurels but continue to forge ahead in this commendable work. It is a work that is in no manner confined to research investigators and public health devotees; but one in which all members of the profession may and should lend aid. It is one of these in which practically all medical men are interested that I wish to discuss.

Together with others, I have on a number of occasions endeavored to bring before the profession the incidence, and many of the causes of prostatitis, and have insisted that the terminal and remote results of chronic prostatitis is not the negligible matter that most medical men are prone to attribute to it.

The deposition of fibrous tissue incident to inflammatory changes of years duration ceases to be a minor change as a man approaches, or passes, the half century mark, and the spectre of an operative procedure looms before one. The medical advisor of such a patient cannot be entirely free from censure who has not urged that individual as to the proper procedure to eliminate all traces of inflammation. It is common knowledge that chronic inflammation is a precursor of chronic fibrosis; an acute or sub-acute inflammation of the prostate nearly always subsides into a chronic inflammation. Infection has been found to play a decidedly causative role in vesical neck obstruction. It can play a stellar role in the inflammatory change in the glandular structure or cause a hypertrophy of the muscular element.

Microscopic studies of bladder necks have revealed the successive stages of bar formation, as well as definite hyperplastic changes in the acini and glandular elements. The microscopic picture ranging from sub-acute and chronic inflammation to definite and complete fibrosis is complete.

The anatomical structure of the posterior urethra and its adnexa is such that when one portion is involved in an inflammatory process the remainder is likewise affected, probably in varying degrees. This is the rule rather than the exception.

Histopathologic studies reveal all the gradations of inflammatory changes. The areas of suppuration, clinically prostatic abscess, and follicular suppuration denoting the acute; while different stages of the sub-acute and chronic types are readily demonstrable. Differing specimen will show polymorphonuclear lucocytes, cellular exudate, engorged blood vessels, exudative infiltration, exfoliated epithelium, plasma cells and desquamation. Cystic changes of the sub-mucosal glands, compressed acini, peri-acinar and intra-acinar cellular exudation; and round cell peri-vascular infiltration, chronic infiltrative inflammation, granulation tissue, highly vascular fibrous tissue formation, cystic dilation, newly formed fibrous tissue, and hyperplastic changes in the submucosal glands.

Much controversy ensued at one time as to the etiological factors involved in prostatism, one group contending that inflammatory influences were the sources of the trouble, while the other maintained that such could not be the case since a goodly and definite number of these unfortunate individuals gave no history of ever having had gonorrhea. Since that time we have come to realize that from 25% to 40% of cases of prostatitis are non-specific in origin,[1] and that many individuals who contracted their first gonorrheal infection had a pre-existing prostato-vesiculitis, the etiology of which has been discussed in previous communications.[1, 2]

Ewing[3] states: "The whole picture indicates a chronic catarrhal and productive inflammation with unusual epithelial growth." And again, "several features stand against the neoplastic theory for the glandular hypertrophy. This process begins diffusely or in multiple foci; it is associated with peri-glandular fibrosis, and the process is self-limited. The structure is not

that of a neoplasm, and when true adenoma arises in the course of hypertrophy it presents a very different structure. In my material, adenoma is rare in enlarged prostates."

A perusal of the changes enumerated from the histo-pathological examination indicates clearly the part that inflammation plays in either the fibrotic type or the glandular type. The latter type is considered nearer a neoplastic manifestation. However, it will be seen from the foregoing microscopic findings that glandular changes likewise follow infection and inflammation. Irritation, as is well known, plays a causative role in tumor growth, manifested in both benign and malignant neoplasms.

If my premise is correct, that infection and inflammation are a tremendous force in the causation of prostatism, then it is squarely up to the profession to greatly reduce the instances of this condition. It is possibly well to remark that the vast majority of adult males are victims of chronic prostatitis, that many of these are symptomless, or the symptoms are misinterpreted and some inoffensive organ blamed. Prostatitis can be cured under proper regime and attention; however, some cases require great diligence, skill and patience on the part of both patient and physician.

All adult male patients seeking a general examination should receive an intelligent investigation of the prostate and seminal vesicles; by far the majority will require some prostatic attention. Especially is this true of those in middle life. Every physician should be thoroughly familiar with the local symptoms of prostatitis.

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THAT'S DIFFERENT

"You must have a wonderful memory to keep all that knowledge in your head," praised Gray.

"Yes," said Bray, "I never forget anything when it is once in my head."

Gray smiled artfully, and said: "Well, old man, how about that $25 I lent you some time back?"

"Of course, that's different," came from Bray. "I put that in my pocket."

NOTES ON RECENT PROGRESS IN OTOLARYNGOLOGY*

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It was my intention to review the advance of otolaryngology and to point out its contribution to general medicine; but a little reflection showed that after all most of the advances came the other way. Some pioneers of our specialty thought of it as an anatomic specialty, with its own segregated problems, with an aloofness, perhaps, from the crass disorders that affect the general economy, and with its successes in the skilful snipping of a turbinate or the courageous annihilation of an ethmoid. Such an ideal no longer holds and we realize that our boasted illuminations into cavities difficult of access, glimpse at most a small part of the total anatomic defect or perverted physiology. We must reaffirm our dependence on the physiologist, the pathologist, the internist and men in other lines, and assert our determination to keep abreast of advances in all fields of medicine and to keep that broad perspective that prevents degradation of a specialty. In that mood our review shows us that our advances are in no little measure a recognition of discoveries made elsewhere and their application to our field.

A case in point is that disease called among other names agranulocytic angina and malignant neutropenia. We pounced upon it as our own because its earliest noted lesions were in our territory. Now it begins to emerge from the studies of Schultz down to Kracke and many others that the ulcerative lesions are near the terminal stage of a process that has begun a considerable time before with a loss of the myelocytic function of the bone marrow, exhausted perhaps by repeated infections, x-rays and the gamma rays of radium and certain chemicals notably benzene derivatives. Since supplying definite chemical constituents of adenin and nucleotides leads to a striking regeneration of granulocytes and recovery in a large percentage of cases weight is added to this hypothesis.

Further study of ulcerative lesions in the upper respiratory tract has led to advances that are only now becoming generally appre-

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ciated. The role of the organism of Vincent-Plaut has been shown of increasing importance in lesions where it was previously unsuspected. It is of course recognized that any open lesion, especially if it has any limitation of oxygen supply, is a fertile field for the spirilla and fusiform bacilli and that these are probably more or less constantly present in the mouth and throat. Davis and Pilot found them in about 85% of all tonsils. In syphilitic lesions of the mouth they commonly live as saprophytes as well as in other types of gingivitis and tonsillitis, but it seems to me that more and more of the unusual effects about the mouth and throat not easily understood are best explained by the peculiar habits of these organisms. The findings of large numbers of them by smear and proper anaerobe culture, as well as the prompt clinical response to arsenicals would appear to prove that many of the stubborn so-called pyorrheas, the persistent subacute tonsillitis that may have a high monocyte count which confuses it with a true mononucleosis, the atypical stomatitis may bear a causal relation to these organisms. The so-called Ludwig's angina originally explained as due to the heightening of virulence of certain organisms, notably streptococcus, by infection under pressure in the tense spaces of the neck fascias especially around the submaxillary gland, was never understandable on that basis. If we assume that in the presence of an acute oral or throat sepsis anaerobic organisms advance, cause necrosis and edema which choke off circulation in the local territory and provide ideal conditions for the growth of these organisms, which can then be combated only by the widest and most radical incision, we have a more plausible explanation. In our service at Cook County Hospital we previously saw many of these cases advance to a serious condition or death. Since we have adiministered arsenicals early as a routine we have seen very few progress to the previous terrible state. Bacteriologists and pathologists, notably Davis, Pilot and Tunnicliffe have for some time emphasized the importance of these organisms in ulcerative, putrid and gangrenous states in the oral and respiratory tracts, and clinicians constantly should bear them in mind.

I have already exhibited my enthusiasm for the treatment of malignancy about the head and neck by surgical diathermy. I pointed out the advantages of diathermy and the disadvantages of irradiation, especially because it might be an easy method of exploitation and negligence, and because its use often carried the patient past the point where he might be saved by more effective measures, and temporarily buried cancer cells which might spring into new activity later. Now I think it has come to be recognized that the two fields are not so antagonistic but in a considerable measure supplementary due especially to a better understanding of the radiation sensitivity of tumors by their histopathology and grading and more knowledge of their behavior from their location and a study of their clinical course. For instance a papillary carcinoma of the tip or anterior border of the tongue if it approaches at all a mature cell type, especially if seen early offers excellent chances for cure by diathermy. If it involves the base or posterior third of the tongue, if ulcerative or fissured, if rapidly growing and if of a histologically immature type it had better be treated by irradiation. That is true also of sarcomas except fibrosarcomas, and of most carcinomas of the tonsil and pharynx, especially the so-called lymphoepitheliomas and transitional celled carcinomas. To my knowledge no series of cases can equal the recent report from the Memorial Hospital in New York of 20.4% of five years cures of carcinoma of the tonsil by radium. In my experience in the antrum the result appears better by diathermy and that appears true of all but very small cancers of the ear, face, cheek, and nose. An experience with many unhappy sufferers of improper irradiation brings home the fact that while in proper hands and in adequate amounts x-rays and radium may be very valuable, there is no place for the occasional or casual or careless user of radium.

No discussion of diathermy is complete without a consideration of the recent enthusiasm for the coagulation of tonsils. The question of removal of tonsils by surgical diathermy has been reopened by pronouncements like that of Dan McKenzie who believes that for adults it will be the method of choice, and by the discussions of Dillenger, Skillern Jr., Cohen and many others who have championed the method. One who has followed the great refinements in

technique from the early crude methods of diathermy destruction, must preserve an open mind concerning future possibilities, yet in several years of earnest effort to study all methods and see all demonstrations staged in this vicinity by reputed leaders of technique, I have not found one that in my hands with a fair background of electro-surgery, achieved routinely in tonsils not operated on a satisfactory result; nor have I seen more than a very few finished cases that I could consider passable. Like the experience with boosters of local climates, it has been my experience to see chiefly the cases claimed unusual after diathermy: the shell filled with half a thimbleful of caseous material; the pocket of creamy pus buried without drainage like that described by Novak, associated with marked cardiac disturbance and sepsis; the rather frequent scarred upper pole and plica fragments; and the not uncommon case that looked like the cautery burnt tonsil, which shows histologically minute abscesses closed off by fibrosis.

In a series of cases in which I did one side by dissection, the other by electrocoagulation at the same seance, the pain by operation was decidedly less for the one sitting, the post-operative discomfort definitely to the advantage of coagulation, and only one of the diathermy cases had troublesome hemorrhage. End results could not be compared as none of these clinic cases persisted with me until I was satisfied with the diathermy job. I use the method fairly frequently in my office to destroy flat, small tonsil fragments lying in the open fossa, yet I do this less often than formerly because of the disappointment several weeks later at seeing recurrences where I had before seen apparently completely coagulated tissue impaled on my electrode. The post-operative discomfort and reaction with these fragments is certainly less than if they are dissected and one can feel rather secure about hemorrhage.

Some statements made about diathermy of tonsils have certainly been overdrawn. No hocus-pocus of electrical equipment can make a tonsillectomist out of the unqualified, the heavy handed or the inept. No one who has not the judgment, the instrument sense, the dexterity, and the ability to visualize deeper relations that make surgery possible can find in diathermy an easy alternative to tonsillectomy, yet that is just the idea one finds in the hopeful hundreds that crowd some of the staged demonstrations.

I have not abandoned hope that I may yet find a technique of diathermy that I may honestly use for tonsillectomy and recommend to timorous patients as a proper procedure. Now I concede only one routine indication for the method—hemophilia and hemorrhagic states—and that is an extremely rare one. Occasionally a fearful patient may properly be relieved in part of mass toxin absorption by this method and the tubercular who stand operation poorly may be proper cases. For the present, I shall continue to do operative tonsillectomies on my older patients, my children, my cardiacs and nephritics where tonsil removal is advisable, with the feeling that one procedure usually finishes their trial with a minimum total of hazard and discomfort, with a belief that I have done my best to insure a complete elimination of a focus, any part of which may be dangerous, with least damage locally and to the organism as a whole.

One chapter in rhinology that is being rapidly rewritten is the one on the so-called vasomotor rhinitis. A better understanding of the intermittent turgescences of the nose permits an improved etiological classification. The intumescence of adolescence and of unstable vegetative system nervous control still stand but as of relatively little importance.

Allergic states emerge as perhaps the most salient group, not only as exemplified by hay fever, but also in those related conditions due to food or environmental proteins or secondary to bacterial infections. These in their typical states are easy to recognize by the pale, boggy membranes, covered with glairy mucoid secretion, and are easily diagnosed by their sudden onset with sneezing, profuse rhinorrhea, and blocking, the findings of many eosinophiles in the secretion and the individual or family history of other sensitization. The diagnosis of the cause is a matter of fine laboratory work, patience and the cunning of the best fiction detective, and the subject is too large to be more than mentioned here.

What does need emphasis is the frequent association of such conditions with masking infection, which itself is provocative of much harm and yet cannot be eliminated without

recognizing and relieving the underlying allergy. Many cases in point might be cited. A doctor's wife had had early in life many colds with little disability, but in the preceding five years had been so disabled by sinus infections and polyps that two of the best specialists had subjected her to quite radical surgery with only temporary relief. Inspection showed suspicious membranes, skin tests indicated marked sensitiveness to eggs, to chicken and a few other things. A few polyps only were removed. By merely avoiding the substances to which she is sensitive this patient has been well and free from nasal trouble for the last three years. A child was seen over a period of two years with infections that required opening his ear drums six times during that period. Because of colds at no time was he in school continuously for more than three weeks. Two series of skin tests failed, but a diet history led to elimination of eggs and immediately this child became free of his many colds and lost time from school only once in the next two years. A frequent experience of this kind leads me to believe that Duke's assertion that ten per cent. of people suffer from some form of allergy is not overdrawn. Results here can be achieved only by the most thorough-going tests and the elimination of all possible allergens in the smallest amounts, at least until those of chief importance are identified.

Another disturbance of nasal membranes associated often also with infections is that of glandular dysfunction of which the commonest and most typical is due to hypothyroidism. Here the membranes are swollen, reddish as a rule rather than pale with heavy bogginess that suggests the skin of a myxedema. A history is usually given of the associated general symptoms, the basal metabolic rate is low, and doses of thyroid extract, often not large, may lead to marked improvement in the membranes as well as in associated sinusitis and otitis and in general well being. In some patients blocking is a very accurate gauge of their thyroid depression.

In this condition calcium metabolism has not in my experience been typically disturbed. There is however an allied condition, perhaps due to hypoparathyroidism with lowered blood calcium in which parathormone and calcium have apparently given some relief.

Another membrane disturbance is that associated with vitamin insufficiency, especially of vitamin A, and it is not so rare as one should suspect in this prosperous community. It is seen in two classes of patients, dieting women and improperly fed children. Many workers, notably Daniels and Dean, have shown the marked susceptibility to respiratory infections of laboratory animals with diets defective in vitamin A, and the same thing holds for children. More recent work seems definitely to show that with a considerable lack of vitamin A hyalinization of the epithelium of mucous surfaces takes place, with obvious abnormality of the membranes, and a loss of their power to resist the invasion of microorganisms and a loss of protective mucus. The question of the actual loss of bactericidal power aside from an anatomic defect is apparently still in controversy. In older patients who have been trying religiously to reduce or who have been avoiding fats from real or fancied fear of gall bladder disease, unusual nasal symptoms associated with rhinorrhea colds or even sinus infections and often complicated by obscure eye symptoms, the restoration of a full diet or the supplying of cod or halibut liver oil occasionally works wonders.

The idea of Jarvis and others that perverted acid-base metabolism may lead to profound mucous membrane disturbance is supported by the occasional marked response to the giving of acid or alkali. It appears however that the basic fault may be in the buffer substances in the blood, and dietary factors, as for instance excessive carbohydrates may be at fault.

Proper ventilation or humidity are also recognized as of much importance in these nasal blockings.

Other questions of recent interest can only be listed. They include the increasing recognition of sinusitis as an important factor in non-tuberculous pulmonary disease; non-diphtheric obstructive laryngitis and tracheitis which may be epidemic in children and may require low tracheotomy and aspiration; Wittmack's theory of arrested pneumatization in infancy bearing on later mastoiditis; "petrositis," a clinical syndrome with deep retro-orbital pain, profuse aural discharge after mastoid operation and sepsis due to infection in the pneumatasized petrous apex, sometimes a

precursor to meningitis unless proper drainage is provided; the study of histiocytes and immunity in nasal mucosa; hematology in diagnosis and prognosis of sepsis, especially secondary to ear disease; advances in the study of progressive deafness. These are large subjects which might speedily involve the whole field of medicine.

This discussion has had to be dogmatic to cover the subject and has really perhaps given little more than its author's crystallized opinions on matters of recent interest. It is hoped however that we have demonstrated that otolaryngologists are after all human beings; and that they yearn for knowledge concerning human functions and the distortions thereof and their relief as do other seekers after truth in the medical field.

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SURGERY IN PULMONARY TUBERCULOSIS*

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You have assigned to me the subject, "Thoracoplasty as the Procedure of Choice After Sanitarium Treatment Has Failed." I have not asked to have the title changed because there is no way that I can state my opinion more forcibly than to deny emphatically the two insinuations of the title; first, that a thoracoplasty is to be used only after sanitarium treatment has failed; and second, that there is no other alternative than to use the conventional type of thoracoplasty in the treatment of those patients who have not been helped by sanitarium regime. Both these implications are false and should be discarded along with many other antiquated medical ideas.

Thoracoplasty should not be considered only in the light of a measure of last resort. To do so would mean that many patients will be excluded from the benefits of thoracoplasty until such a time when neither thoracoplasty nor anything else can save them. Although it is impossible for me in the brief period assigned for this talk to enumerate all the indications for thoracoplasty, I will, however, mention a few types of cases in which thoracoplasty is indicated comparatively early.

Economic conditions, in a large group of cases, are of such a nature that long sanitarium treatment is not only a hardship but a catastrophe even though a cure may occur eventually. In such cases, if the lesion is one sided and especially if there is a tendency towards fibrosis, a thoracoplasty may cut short the term of invalidism by several years and may mean the preservation of a family and the future happiness of the patient and his dependents as well. This is particularly true in families in which children are present and in which prolonged medical treatment must perforce be either in a sanitarium, or, if at home, at a definite risk of infection of the children.

There are patients in whom a positive sputum persists for a long time though they get along nicely. This is especially true when small cavities are present. These cavities are frequently subtended by broad pleural adhesions so that artificial pneumothorax is of no avail. In this type of case it is possible that medical treatment may cure the patient eventually. However, thoracoplasty may reduce the invalidism by many years, act as a method of closing the case, and finally may prevent a spread of the infection.

Patients with a unilateral infection and with repeated hemorrhages may well constitute a type of case in which the dangers and inconvenience of surgery are far outweighed by the dangers of the frequent blood loss. Therefore, thoracoplasty is indicated early.

Another broad classification of cases in which thoracoplasty is indicated early is that group in which pneumothorax must be abandoned. This group contains two sub classes, those with unilateral infection in which adhesions are forming, and those in whom an empyema has developed. In the first class of cases, it may be possible to perform a pneumolysis in a certain number of instances. In the majority, however, there is no alternative but to let the lung expand prematurely or to resort to thoracoplasty. The second class of case, namely that of empyema, is one which I consider the most difficult with which I, as a surgeon, ever have to deal. I

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*Paper read at the meeting of the Mississippi Valley Tuberculosis Society at Indianapolis, September 12, 1932.

feel very definitely that it is a grave mistake to attempt to cure the empyema first, and then to continue either with medical treatment or to perform a thoracoplasty. I am convinced that the only satisfactory method of treatment is to prevent re-expansion of the collapsed lung, and to perform the thoracoplasty while draining the empyema.

Finally, there is one other large group of patients in whom I think nature has pointed the way for thoracoplasty—those who are doing nicely but who still have persistent sputum and in whom a marked fibrosis of the lung is developing with a shrinking of the infected lung and a pulling of the mediastinum to the affected side. A large number of these patients will get well by medical treatment but it is especially for them that an extrapleural thoracoplasty will speed up the convalescence.

In order to be able to advocate thoracoplasty to the extent that I do—namely, that I urge it occasionally in patients who might respond to medical treatment—I must feel that the dangers from thoracoplasty are minimal, that the inconvenience to the patient is comparatively slight, and that the final results are good. This opinion is based upon the results which I myself have seen. I will attempt to describe briefly a few points in our technique which may be responsible for our gratifying results.

For the last several years, I have been performing the majority of cases under ethylene anesthesia. Under local anesthesia, as advocated by a large number if not the majority of writers, the operation of artificial thoracoplasty is an ordeal for the patient. A light ethylene anesthesia does not increase the risk of the operation appreciably and it does decrease the discomfort immensely. In my experience, those patients who have had ethylene have gotten along better than those who have had local or spinal anesthesia. If ethylene anesthesia is contraindicated for some reason, I prefer spinal as a second choice. The eight patients who have been operated on under spinal have gotten along splendidly with it.

The great majority of complete thoracoplasties I do in two stages and only two. Each additional stage is an additional source of discomfort to the patient, and if the thoracoplasty can be performed safely in two stages, it is improper to prolong the procedure to three or four. There are certain patients, of course, in whom more than two stages will be required. I have one patient who is now well in whom eight operations were necessary to finally complete the thoracoplasty.

Speed in operation is a very important factor in eliminating the dangers. Occasionally on previous occasions when I have said this, someone in the discussion has remarked that they would prefer a prolonged, careful operation to a short, careless one. I agree with this entirely. However, I prefer a short, rapid, careful operation to a prolonged operation which may not of necessity be any more careful than the procedure which I adopt. With a well-trained team and an average amount of surgical skill, there is no reason why it should take the operator longer than thirty-five minutes to remove any six ribs. The second stage should be done more quickly. There is no reason why, in performing an operation within these time limits, there should be the slightest sacrifice of care, gentleness, and of complete hemostasis. There is no question in my mind that my success with the two stage operation has to a great extent been due to the speed with which the operations have been performed.

The operative mortality of thoracoplasty in well selected cases is practically negligible; certainly less than the mortality from such common abdominal operations as cholecystectomy, gastrectomy, etc. The convalescence from the operation is no more unpleasant than the convalescence from these same abdominal operations.

The deformity, which most prospective subjects for thoracoplasty seem to dread above all else, is practically nil. As long as patients are not members of a nudist colony but dress according to the customs of the land, no one, not even their personal friends, will be able to tell by looking at them which side was collapsed. This does not seem strange when we realize that our coats, blouses, and shirtwaists hang from our shoulders and that the position of the shoulder girdle is in no way affected by the removal of sections of ribs.

Finally, there is no question in my mind that the gratifying results before alluded to are due in a very great measure to the fact that every patient who has had a thoracoplasty has returned to the sanitarium for a continuation

of the sanitarium regime. The minimum length of time for the postoperative sanitarium regime is from three to six months and in many cases longer. I know of no better way of bringing thoracoplasty into disrepute than to return the patients directly to industry instead of sending them back to a sanitarium. I operate upon no patient for thoracoplasty without the definite understanding that that patient, even though his sputum may be negative by the time he is ready to leave the hospital, will return to a sanitarium for a minimum period of at least three to six months.

Statistics at present mean very little. The statistics by no manner of means tell the whole story. They vary not only according to the class of patients from which the surgeon draws his material and to the skill of the surgeon but also to a great extent to the kindness of the operator's heart. A hard hearted surgeon who will select his patients with great care should have over 75 per cent. of them returned to industry. On the other hand, a more tender hearted surgeon who feels loath to deprive a patient of a possible chance, and who will admit for operation those in whom the prognosis is unfavorable, will have his kind heartedness repaid by the gratification of knowing that he has restored to normal life a certain number of patients otherwise doomed, but at the expense of the statistical results he will be able to publish. Archibald, at the meeting of the American College of Surgeons in Chicago a few years ago, in quoting his statistics, divided his patients into three groups—those in whom before operation the prognosis was excellent; those in whom the prognosis was doubtful; and those in whom the prognosis was poor. This is a fair way of doing it and fine for individual classifications, but not accurate enough for the purposes for which statistics are usually used.

Roughly speaking, 40 per cent. of the patients on whom I have operated are back in industry; 40 per cent. are in sanitariums and 20 per cent. are dead. The operative mortality has been about 1 per cent. Of the 20 per cent. dead, some died within a few weeks after operation and some within a few years. Of the 40 per cent. back in industry, it is possible that some of these may shift into the sanitarium group or some may even succumb to tuberculosis. We have had the experience of seeing patients who have been working for many years and have been apparently cured, suddenly have a flare-up of the old tuberculosis (usually as a result of some intercurrent pulmonary infection) which may be very apt to lead to death. Of the 40 per cent. in a sanitarium, many I hope will soon be able to be discharged into industry, increasing the percentage in that group. At present we are attempting to arrive at statistics by classifying our cases before operation into three groups, somewhat as Achibald described, by basing our groupings upon our preoperative impression as to whether the prognosis is good, bad or indifferent.

The second insinuation which the title, "Thoracoplasty as the Procedure of Choice After Sanitarium Treatment Has Failed" is, that thoracoplasty (and by this undoubtedly is meant the extrapleural thoracoplasty after the manner of Sauerbruch) is the only operation at our command. This is not true. There are several other procedures which the surgeon has at his call. The operation of selective collapse or selective thoracoplasty has a tremendous usefulness and I think within a few years, and especially as surgeons get the patients earlier, the complete collapse of an entire side will be infrequent as compared to the collapse of that portion of the lung particularly involved. Selective collapse of a basal lesion may perhaps be obtained by phrenicectomy. A collapse of an apex of the lung may be obtained by thoracoplasty of the upper portion of the chest without interfering with collapse of the base. Cases have now been reported of selective collapse of both apexes and as these are done more frequently and with good judgment, we will probably find the results of this procedure extremely gratifying.

Selective or focal collapse may in certain instances be obtained by use of localized pressure either with paraffin fills or rubber bags. Personally the use of rubber bags seems more logical than the paraffin fills. Several years ago, Dr. Howard Lilienthal of New York suggested the incision and drainage of large tuberculous cavities of the lung. I think that this procedure will do much for those patients who are septic and in whom the cavities are readily accessible. Phrenicectomy has a cer-

tain usefulness though there is no question that its value has been tremendously overemphasized. I am using it less and less and now have stopped entirely using it as a routine procedure previous to thoracoplasty. The preservation of the diaphragmatic motion is of tremendous value in the majority of patients in whom a thoracoplasty is to be performed, especially when resection of the upper ribs forms the first stage of the operation.

Summary: I will summarize this discussion with these few paragraphs.

1. Thoracoplasty must not of necessity be reserved until medical treatment has failed. This would mean that a number of patients would come to the surgeon too late to be helped, and that the length of invalidism would be prolonged unnecessarily for others.

2. Thoracoplasty must not be considered apart from the general sanitarium treatment of tuberculosis. It should be recognized as much a part of a routine treatment in certain instances as artificial pneumothorax, graded exercises, or any other of numerous procedures.

3. The conventional extrapleural thoracoplasty is by no means the only method of treatment. Selective collapse will undoubtedly take a very important place in the surgery of tuberculosis.

4. The importance of phrenicectomy has in my opinion been greatly overestimated.

5. When you as phthisiotherapists turn a patient over to the surgeon for any of these operative procedures neither he nor you should consider this as an irrevocable gift but only as a temporary loan. Every patient should return to you after the operation for further sanitarium treatment.

6. In my mind there is no such division in the treatment of tuberculosis as medical or surgical treatment. It only happens that at some stages during the treatment the phthisiotherapist is the more active of the medical attendants, at other times the surgeon.

THE WISE MEN

The wisest men that ever you knew
Have never dreamed it treason
To rest a bit—and jest a bit,
And balance up their reason;
To laugh a bit—and chaff a bit,
And joke a bit in season.

—Laughing Gas.

COLLAPSE THERAPY OF PULMONARY TUBERCULOSIS IN NEW ENGLAND STATES

John B. Hawes II and Moses J. Stone, Boston (*Journal A. M. A.*, June 11, 1932), are of the opinion that tuberculosis and its diagnosis and treatment should be given distinctly more attention in medical schools than is now the case. Every general hospital, large or small, should freely and willingly admit tuberculous patients for study, diagnosis and operative treatment, if necessary. Further, each general hospital should have on its consulting staff at least, which in every case could easily be arranged, someone who could speak and act with authority in such matters. Every tuberculosis hospital and sanatorium should have an x-ray plant or easy access to one and should be otherwise equipped to carry on compression treatment, while, of course, most important of all, the members of its staff should be trained in the selection of cases and in the technic of pneumothorax. Phrenicectomy and thoracoplastic operation of course require the services of a surgeon trained in thoracic surgery. The subject is of such real importance that it should form part of the yearly program of every county and local medical society. The authors have attended many meetings where such matters were discussed, but either they were for a selected group of men engaged in this work or, if for the general medical public, of such a technical and detailed nature as to be practically devoid of interest and value. They feel that the superintendents of tuberculosis hospitals and sanatoriums should not only write and publish articles on this subject but invite and urge the local medical profession to attend meetings where clinical demonstrations could be held and the whole subject of the modern treatment of tuberculosis presented in a simple and practical way.

CONTRARY THERAPEUTIC AND SEX RELATIONSHIP OF SYPHILIS AND TUBERCULOSIS

William F. Petersen and Rudolph Hecht, Chicago (*Journal A. M. A.*, July 9, 1932), point out that the established therapeusis of tuberculosis and of syphilis is antithetical. The alteratives, in which category nonspecific therapy may be included, used in dosages followed by catabolic effects, are effective in syphilis but harmful in tuberculosis. The biologic changes incidental to the female sex cycle have a corresponding contrary effect on these infections. Tuberculosis in the female is more malignant, syphilis generally more benignant, the reasons being found in the enhanced inflammatory reaction of the premenstruum. The sex liability of the tuberculous patient finds clear expression in the mortality curve, while the relative protection of the syphilitic female is demonstrated in the greatly lessened incidence of neurosyphilis. Fundamentally, of course, the difference in the ultimate clinical effect of the identical biologic cycle lies in the ability or disability of the tissues and fluids of the body to dispose of the virus which is disseminated when premenstrual activation of localized lesions takes place.

Correspondence

DR. VAN DERSLICE—A TRIBUTE

Oak Park, Ill., January 10, 1933

To the Editor:

James Warren Van Derslice was a man loved by his close associates. He was a man, through and through. And during an acquaintanceship of over thirty years I never once found him lacking in the fundamentals of high manliness —a great record that for anyone.

Organized medicine, about twenty-five years ago, suffered a rift within itself. One faction was called "highbrow"; the other "lowbrow." And because of the partisanship he showed at that time Dr. Van Derslice was ever after called a "lowbrow."

For the younger generation present I should explain that in the days when this rift occurred organized medicine was not the fine and democratic body that it is today. Rather was it a cabal—a great society ruled by the iron hand of the select few who stood omnipotent, who dictated policies, standards and pursuits. You were ostracized if you deviated from the rules and regulations laid down by this group of autocrats.

From this mighty Mussolini method there developed the "lowbrow" group with "Van" one of its first agitators. The "lowbrows" had their beginnings in the Chicago Medical Society, and later invaded the national organization. Besides Dr. Van Derslice at the outset, and Doctors Nagel, Fowler, Ferguson and Kraft I might mention plenty of others in this brave handful.

They were all of them beaten and knocked down, time and time again. But they always got up. And finally they stayed up, not to be knocked down again. They routed the highbrows completely. Ever since the lowbrows have been in the saddle, but if it had not been for Dr. Van Derslice and his co-workers would that element have ever made so much as a stirrup to the unending harm of medicine?

Year after year I attended conventions with "Van." What I state of his fighting faculties is intimate knowledge, and not hearsay. Fighting for a principle that he felt was right, I have known Van to sit in a caucus all night long. And those experiences I count among the rarest joys of my life.

When we take inventory of what life has given us or denied, of what we have possessed or of what has passed us by, even more than temporary fame or monetary success the thing that in reminiscence seems to have brought us greatest delight is the contact and the friendships with men like James Warren Van Derslice.

His enduring friendships were counted by the thousands. Among his intimates were men of both national and international repute. There were men like Cotton, Billings, Pusey, Cary and Dean Lewis, Mattas of New Orleans, Simmons of San Francisco, Brewer of New York, Martin of Philadelphia, Crile of Cleveland, Moynihan of Leeds and Lane of London, to whom he was always just "Van." Few have had the rare privilege of enjoying the friendship of such men. It is a fine thing to have done so.

Upon many of our own closeknit group he has made an endearing and enduring and potent impression. Not only my humble self will bear witness to this but many others including Dr. Anna E. Blount and hundreds of women physicians as well as Oscar Hawkinson, Frank Needham, Kerr and Scott.

Even though he differed perhaps from them in policy, idea or method, yet deep in his heart and soul he had the utmost respect for their individual opinions, as I have often heard him admit.

With a keen sense of justice and passion for fair dealing, he was either for you or against you. No one ever knew him to be guilty of a small or dirty trick, even to an arch enemy. Nor was there ever any question as to where Dr. Van Derslice stood. He took defeat as philosophically as he did victory, and held no malice afterwards. But you never caught him straddling a fence, with muscles tensed to jump on the winning side. Not Van! Those who knew him best, loved him most. He was a wonderful chap.

His leadership in the Aux Plaines society must be referred to. Ever since the component society decided to have branches, Dr. Van Der-

slice had represented us in the council. Most of the time his advice was right. Which is as much as can be said for any man since none of us is ever 100% perfect. You couldn't expect Van to be the exception. To the young men of the Aux Plaines who are to carry on as we of the old guard drop out from time to time, "Van" has left a priceless heritage. He was for the group first, for himself afterwards.

In the Aux Plaines branch of the Oak Park Physicians club for the past ten years nothing was ever taken up, nor any decisions made, unless "Van" had a finger in the pie. I feel sure that I can say without fear of contradiction that "Van" did a pretty good job. Never was there a member of whom I know anything who was more beloved, or who will be as much missed as James Warren Van Derslice, and this as much as anything else because he possessed the rare quality of dependability. Though we are all touched by "Van's" going yet there is a sunny side to this going while you are yet comparatively young and still in the hey-day of success.

I remember that when I was an undergraduate the venerable Dr. Oscar King in an address to the class remarked "Have an ideal; chart your course, and steer for it. Even if you never reach the goal, you will be all the better men for the trying." That very day I set Dr. Wm. E. Quine as my goal. I have never reached his medical eminence, but I have never ceased trying to emulate in other ways the great and good physician that he was, and I sincerely believe that by his ideals and his integrity that he moulded the character of more medical students than has any other medical man within my knowledge. And Van was like that. I believe that during the last five years Van's leadership of the Aux Plaines society attained a higher pinnacle of success than has ever been reached by any other leader in any other branch of the Chicago Medical Society. I know I speak the sentiments of many physicians when I say that "Van's" life, his works and his part in the medical activities of his colleagues especially in Oak Park has left on our hearts an indelible imprint.

Harry John Stuart.

THE LENS ANTIGEN TREATMENT OF CATARACT

To The Editor: Noting the abstract of an article by Dr. A. E. Davis on The Lens Antigen Treatment of Cataract in the January number of your Journal, it seemed to me that your readers should know how the profession have reacted to Dr. Davis' report. In the first place we all know that many lens opacities remain stationary throughout life. Early senile cataract may remain stationary for many years, and changes of refraction during this time may improve vision considerably.

Ellis (Arch. of Oph. 1928:57 p. 46) reported a series of cases treated by lens antigen compared with the same number of untreated cases and found an equal number in both series which remained stationary. No clearing of opacities was observed in either series. This is what one would expect since there are no theoretical reasons why immunization to lens antigen would cause absorption of only the opaque portions of the lens, leaving the clear lens intact, and Dr. Davis has never claimed to produce absorption of the whole lens.

So far as we can make out, injections of lens antigen simply act as foreign proteins injections, the reaction from which may occasionally be severe, but is incapable of affecting cataract. They affect principally the mental attitude of the suggestible patient and since the course of injections are long and expensive, your correspondent and a number of prominent ophthalmologists with whom he has discussed this subject feel that the method should not be recommended.

Sanford Gifford, M.D.

PARENTAGE OR GENES OR ENVIRONMENT

Kansas City, Mo.

To The Editor: In a Chicago hospital two babies were born just at the same time; both males. They were tagged routinely. Later, it was claimed they had gotten mixed: Thereby adding commercial grist to the day's news, trouble for the hospital, distress for four parents, not to mention embarrassment for the courts and the scientists.

Here was need for a Solomon to untangle the snarl. Why—what difference did it make outside of sentiment? since none could tell the difference!

Science could not tell? It was embarrassing for science!

Then is it all just a gamble—"Heads you win"?' Had effort been made by science or the parents to produce a perfect child? "Nine hundred and ninety-nine babies" are just accidental anyway. Were these two boys then just two more babies? If not, what would make one child *right* or better or different? Seed? Whose seed—father's or mother's? Science does not know, and parents cannot know; and, really, parents 999 are not interested until the baby is born—scientifically! *That must* be scientific! —After all desperate effort at prevention.

Suppose parents *were* interested scientifically, sooner, before!—"In the beginning". Interested eugenically in begetting children, instead of accidentally.

Isadora Duncan was reported in the press to have proposed to Bernard Shaw that they mate to produce the brains of a genius in the body of a goddess. To which it is alleged that Shaw replied, "But how can we know? the product might have *my* body and *your brain!*"

Science is baffled, for the time.

Not only is the question of eugenics here involved—though our friends the birthcontrollers do not seem to think the begetting of children in wedlock is ever, or very rarely, more than accidental (What do you think?)—and since we cannot tell whose seed are *right,* whose seed contribute the controlling or dominant influence, nor which seeds bear the dominant hereditary taint of feeble-mindedness, or what have you? And, since Science cannot say what is in the *genes,* or whether the genes or the heredity or the environment causes physical deformity, feeble-mindedness; or, if each individual human being is just unique! Then shall the mother, outside of sentiment, simply take the baby handed her and proceed with the job? Supposed they *are* mixed and that she does not know it? Is there any difference? Many plays and screen pictures show a difference in results! Read Mark Twain's "Puddinhead Wilson". But is there a difference in babies? Experts cannot say. George A. Dorsey asks, in the above mixed babies case, "What did the Chicago experts have to expert on?

The chips! Just the chips. But chips from whose block? Science searches the woodpile.

Solomon says, "Bring the children into court!...Ah!" says he, "this boy h s a Hittite nose! Let's see, the father has a nose like mine! The mother's nose is turned up, now, therefore there is, just arrived, a Hittite nose *gene* in the 'woodpile'."

The doctor says the product will be the result of "the embryonic-material nourishment and uterine barrage of modern physiologic warfare". Then too, besides this, who can say in later years what the endocrine hook-up will do for them:—to say "we are the same that our fathers have been" rather than we are what the function or dysfunction of our endocrine glands make us.

The welfare worker says there may be the *genes* of a prize fighter but the dominants of an artist whose environment produces a bent book-keeper, or a radio crooner.

So Solomon wisely adds, "Bring the children back to me when they are home from the University". O mores! O penates!

While the rule of transmission, the laws of certain physical traits (fairly well established) make us, the exceptions, generalities and averages are baffling. And the environmental influence may outweigh and obscure hereditary gifts*! Then shall the mother ask, "Is this my baby?"

Shall we hereafter dream in our philosophies, and eugenicly beget b. bies, or follow the orthodox natural selection,—or just bring one home? It seems a far cry to the eugenic baby, the elimination of the moron offspring. The sterilization of the criminal unfit seems realized.

HARRY NELSON JENNETT

*Just recently we have been granted by scientists that the general practitioner's contention that there is much in environment is well founded.

MEDICINE VS. SURGERY

To The Editor: Your editorial on the family physician in your issue of September is right along my own line of thought and I am offering a few remarks on the subject as I see it. We older men are dying off pretty rapidly and so cannot step in and fill the breach. The young men are not being educated as family physicians, but rather as specialists, for the specialty is the thing that brings in the coin, you know, and in bigger bunches than does general practice.

Why, I will be hanged if I know, but the specialist is supposed to be a rather superior sort of being and so worthy of greater pay and more homage. The poor cuss who studies medicine these days has to blow in a lot of money before he can earn a cent and because of his rather huge investment he does not see his way to enter general practice, which is such poor pay, you know. We medical men simply eke out sort of an existence at present and all because the dear people have been told that surgery is the "big show" and that drug medication is all taboo, or nearly so.

I agree with all you have written on the subject, but you are not going to get many of your family physicians until some radical changes are made and that in many ways. We must begin teaching the public that surgery is *NOT* the "whole show" and that frequently patients may do better under medical treatment. We must also teach the truth of this to many of our medical men, even some of our older ones who have gone into the specialties and have become of the one track mind type. When we again begin teaching our students something regarding our staple, low priced drugs and bring a lot of them back on our list, then we may look for a return of the family doctor. He cannot come until he knows something about other than the high priced drug specialties, which are offered almost solely because they give a "bigger profit," as the president of one of our leading pharmaceutical concerns said a few years ago. When we again begin learning something of the simples of Galen and other of our forefathers, then will we become fair family physicians.

I happen to be secretary of the staff of our local hospital and so see all the case reports in which death has intervened. I also see the mortality reports and I have not been able to see that treatment is any better or mortality any lower than either were years ago and before we had all this "higher medical education."

Geo. L. Servoss, M.D.
Editor & Manager of Medical Insurance.

And why did the bloodhounds give up the hunt for little Eva?

Voice from the rear—They tell me she was anemic. —*Georgia Tech. Yellow Jacket.*

90 PER CENT OF THE DENTAL PROFESSION ENDORSE THE FIRST MINORITY REPORT OF THE COMMITTEE ON MEDICAL CARE.

Dr. G. Walter Dittmar, president of the American Dental Association, has sent us an illuminating communication. Dr. Dittmar's statement confirms an impression that has been in the mind of the Editor for some time, namely, that the dental profession of America has not been stampeded into approving a system of medical care that will ultimately bring about a system of state medicine or the Dole system that that has been discredited in England and European countries. We quote Dr. Dittmar in full:

Chicago, Jan. 25, 1933

To The Editor:

I have just had an opportunity to read your most excellent editorials in the January issue of your journal, "Happy New Year" and "The Majority Report of the Committee on the Costs of Medical Care" etc., plus the many citations from lay editorials. May I congratulate you and compliment you on your most excellent presentation.

May I add that it is my belief that more than 90% of the dental profession of America endorse the First Minority Report in spite of the position taken by the members of the dental profession acting on the committee.

Personally I'm with you 100%. *More power to you!*

G. Walter Dittmar.

PREVENTION OF MATERNAL INJURY INCIDENT TO PREGNANCY, FROM STANDPOINT OF THE GENERAL PRACTITIONER

In the prevention of maternal injury incident to pregnancy and labor, P. Brooke Bland, Philadelphia (*Journal A. M. A.*, Dec. 3, 1932), discusses some of the common conditions that may lead to serious injury. They are: in the first trimester, pregnancy not within the uterine cavity, but within the fallopian tube, the premature expulsion of an indwelling uterine pregnancy, and abortion; in the second trimester, hydramnion and hydatidiform mole; in the third trimester, toxemia and rupture of the uterus; injuries incident to labor; mechanical factors; prevention of injuries incident to tubal gestation; injuries incident to abortion; hydatidiform mole; injuries from pregnancy toxemia; rupture of the uterus; injuries of the cervix; injuries of the perineum, and damage from sepsis.

Society Proceedings

COOK COUNTY
CHICAGO MEDICAL SOCIETY

Program—The Handicapped Child; January 11, 1933

The Crippled Child

Anne S. Davis, Director, Vocational & Educational Guidance Bureau, Board of Education, City of Chicago

Behavior Problems of Children

Paul Schroeder, Director, Institute for Juvenile Research.

The Delinquent Child

J. P. Molloy, Jr., Clinical Director, Institute for Juvenile Research.

The Dependent Child

Judge Mary Bartelme, Juvenile Court of Cook County.

Program, Sponsored by Loyola University School of Medicine, Jan. 18, 1933

Basic Factors in Edema and Its Management.....Italo F. Volini

The Ambulatory Treatment of Peptic Ulcer.....Sidney A. Portis

Tuberculous Anal Fistula.....Clement L. Martin

Early Diagnosis of Carcinoma of the Cervix.....Henry Schmitz

General Practitioner's Night, January 25, 1933

Backache from the Standpoint of Interest to the General Practitioner

Backache from the Internist's Standpoint.....Charles S. Williamson

The Urological Aspect of Backache....Vincent O'Conor

Backache Due to Gynecological Pathology .....Edward Allen

Backache from the Orthopedic Standpoint.....Philip H. Kreuscher

Discussion..... LeRoy H. Sloan, J. S. Eisenstaedt, Joseph L. Baer, Fremont Chandler, Philip Lewin

WARREN COUNTY

The January Meeting of the Warren County Medical Society was held at Hawcock's Cafe, Monmouth, Illinois, on Thursday, January 19, 1933. The meeting was arranged to honor the oldest member of the Society, Dr. J. M. McClanahan, of Kirkwood, who has been practicing medicine continuously in Warren County, for fifty-nine years. Physicians who have practiced fifty years or more, were invited as special guests of the Society, and those present, were Dr. H. B. Young, Burlington, Iowa; Dr. F. B. Dorsey, Keokuk, Iowa; Dr. J. E. Camp, Augusta; Dr. J. E. Coleman, Canton; Dr. I. F. Harter, Stronghurst, Dr. E. B. Montgomery, Quincy; and Dr. W. W. Williams, of Quincy. Regrets and best wishes were received from a number who were unable to attend the meeting. Among these, were messages from Dr. John R. Neal, President, Illinois State Medical Society, Springfield; Dr. Rolland L. Green, Peoria; Dr. J. B. Bacon, Macomb; and Dr. T. F. Beveridge, of Muscatine, Iowa.

Following the dinner, Dr. Ralph Graham, President of the Warren County Medical Society, introduced Dr. H. L. Kampen of Monmouth, who talked of his associations with Dr. McClanahan over a period of forty years, relating many interesting experiences enjoyed during the long period. He then introduced Dr. McClanahan who gave an unusually interesting talk, greatly appreciated by all present.

Dr. H. M. Camp was asked to introduce the special guests, and among those so introduced were Ralph McClanahan, Helen McClanahan and Dr. Scott McClanahan, children of J. M. McClanahan, Dr. B. V. McClanahan, Galesburg, a nephew, and Dr. Victor McClanahan of Aledo, a cousin. Each of the invited guests in the fifty year class were introduced, and the official representatives of the Illinois State Medical Society, Dr. Philip H. Kreuscher, President-elect, Chicago; Dr. Chas. D. Center, Chairman of the Council, Quincy; Dr. E. P. Coleman, Councilor of the 4th District, Canton, and Miss Jean McArthur, Secretary of the Educational Committee, Chicago.

Dr. H. L. Kampen then presented Dr. McClanahan with the best wishes of his associates of the Warren County Medical Society, a wrist watch, and a leather book commemorating fifty-nine years of practice, in which each guest was requested to give his name and address, and any personal greeting he desired to make a matter of record.

Following these presentations, the President introduced the speakers on the Scientific Program, Drs. Leo Campbell, and H. A. Oberhelman, Associates in Medicine and Surgery respectively, at Rush Medical College, Chicago. They talked on the Medical and Surgical considerations of Diabetes, in a very clear and interesting manner.

Interesting discussions of these talks were made by Drs. George B. Crow, Burlington, J. C. Reddington, Galesburg, E. P. Coleman, Canton, and others present.

It was interesting to note that approximately twenty-five counties were represented in the guests assembled to honor Dr. McClanahan, a delegation of twelve being present from Quincy. Burlington, Keokuk, and other cities of Eastern Iowa were well represented, and practically every city and town in Central and Western Illinois had a number of representatives, including six from Peoria.

There were more than 100 present at this meeting, although weather conditions prevented many from attending, who otherwise would have been there.

Charles P. Blair, M.D.
Secretary, Warren County Medical Society.

NUMBER NINE PILLS

Army Surgeon (to his assistant): "Give this chap a No. 9 pill."

Assistant: "We are out of No. 9, sir."

Army Surgeon: "Well give him a 7 and 2 or 5 and 4."

(*From Sergeant Empy's lecture.*)

DECLINE OF THE "WHITE PLAGUE"

Tuberculosis is vanishing in the United States and in another five years it will be classed as a minor disease. So, at any rate, says Dr. Gerald B. Webb of Colorado in a recent speech before a middle western medical association.

Tuberculosis, as Dr. Webb points out, seems to run in cycles of about 100 years, and all indications now point to the belief that the present cycle is on its downward swing.

Modern methods of treating tuberculosis, beyond a doubt, are more effective than those practiced in former generations. Yet it is odd to realize that the prevalence of the disease seems to depend, at least in part, on mysterious forces beyond human control. Just now it is subsiding, but medical science does not pretend to claim all the credit. There is at work, apparently some factor which we cannot yet understand.—*Edwardsville Intelligencer.*

Marriages

Louis F. Kompare, Waukegan, Ill., to Miss Mary Shifrer of Chicago, Nov. 24, 1932.

Frank W. Nickel to Mrs. Helen Artis Davis, both of Peoria, Ill., Dec. 3, 1932.

Dwight A. Pence to Miss Roselyn Pease, both of Decatur, Ill., October 22, 1932.

Personals

Dr. Ernst Pribram spoke on "Metabolism of the Intestinal Flora and Disease" before the McDonagh Society for Clinical Research, January 20.

Dr. Robert H. Herbst, Chicago, addressed the Kankakee Medical Society, January 12, on "Transurethral Electroresection of the Prostate Gland."

Dr. Louis Rudolph, Chicago, spoke on "Management of the Occiput Posterior Position" before the Tri-City Medical Society at La Salle, January 3.

Dr. Olin West, Chicago, discussed the report of the Committee on the Costs of Medical Care before the Sangamon County Medical Society in Springfield, January 19.

Dr. Clayton J. Lundy addressed the Chicago Society of Internal Medicine, January 23, among others, on "Ventricular Extrasystoles Elicited from the Exposed Human Heart."

Dr. Arthur Earl Walker, among others, addressed the Chicago Neurological Society, January 19, on "Attachments of the Dura Mater to the Cranium."

Dr. William S. Middleton, Madison, Wis., addressed the Peoria City Medical Society, January 3, on "Treatment of Lobar Pneumonia."

At a meeting of the McLean County Medical Society, January 10, Dr. Maximilian J. Hubeny, Chicago, spoke on "Hypertrophic Spondylitis Accompanied by Radiculitis."

At a meeting of the La Salle County Medical Society, January 5, Drs. Philip Kreuscher, Chicago and Harold M. Camp, Monmouth, spoke on fractures of the major joints and modern medical problems, respectively.

The Illinois Radiological Society addressed in Jacksonville, January 22, by Drs. Edward L. Jenkinson and Leslie L. Veseen, Chicago, on "Treatment of Lesions of the Prostate" and "Pathological Conditions of the Kidney," respectively.

Dr. Harry Friedenwald, Baltimore, spoke before the Chicago Opthalmological Society, January 6, on "Retinal Vascular Disease, Its Relation to General Vascular Disease, with Special Reference to Hypertension."

Dr. Harrison S. Martland, chief medical examiner for Essex County, New Jersey, will delivery the ninth Ludvig Hektoen Lecture of the Frank Billings Foundation, February 24. His subject will be "Recent Progress in the Medicolegal Field in the United States."

Dr. Arthur Steindler, Iowa City, addressed the Institute of Traumatic Surgery, January 11, on "Disability Following Simple Fracture at the Wrist": Dr. Hiram Winnett Orr, Lincoln, Neb., "Problems of Chronic Osteomyelitis," and Dr. Fremont A. Chandler, "Lesions of the Isthmus of the Lower Lumbar Vertebrae."

Dr. Anthony Michael Catania, 5258 West Division Street, Chicago, was indicted by the grand jury, Dec. 28, 1932, on the charge of murder by abortion. Dr. Catania was licensed in Illinois in 1930. He was not a member of the Chicago Medical Society.

Speakers before the Chicago Surgical Society, January 6, included Drs. Edward Starr Judd, Rochester, Minn., on surgery of the

biliary tract, and Ralph B. Bettman and Robert S. Baldwin, "Retrograde Jejunal Intussusception."—Dr. George Waldbott, Detroit, addressed the Chicago Society of Allergy, January 16, on "The Allergic Thymic Child."

At a meeting of the Chicago Urological Society, January 26. Dr. William J. Carson, Milwaukee, spoke, among others on, "Supernumerary Kidney."

The St. Clair County Medical Society was addressed in East St. Louis, January 5, by Dr. William H. Olmsted, St. Louis, on "Treatment of Diabetic Arteriosclerosis and Gangrene of Lower Extremities."

The Chicago Gynecological Society was addressed, January 20, by Drs. Louis Rudolph on "Delivery of the Shoulders in Cephalic Presentation; Mechanism and a Modified Method of Delivery," and Joseph B. DeLee, "The Physiology and Conduct of Normal Labor."

Dr. Francis L. Lederer addressed the Decatur Medical Society, January 24, 1933, on the subject "Modern Concepts in the Diagnosis and Treatment of Sinus Conditions," illustrated by lantern slides and motion pictures.

Dr. Bertha VanHoosen addressed the Woman's Club of La Salle, January 9, on "Outwitting Middle Age."

Dr. W. A. Newman Dorland addressed the Physicians' Round Table of Chicago, January 10, on "Shall We Live On?"

Dr. A. C. Ivy presented the subject of "Vivisection" at a meeting of Legislative Chairmen and President of the Clubs belonging to the Illinois Federation of Women's Clubs, January 11.

Dr. Cyril Hale gave a talk on "Mental Health" before the West Suburban Branch of the American Association of University Women in Oak Park, January 11.

Major Joel Connolly, Chief of the Bureau of Sanitary Engineering of the Chicago Board of Health, addressed the Edward Coles School Parent-Teacher Association at the invitation of the Educational Committee, on "Sanitation, Home, School and Community," January 12.

Dr. W. A. Newman Dorland addressed the staff of the Belmont Hospital January 19, on "The Origin of Ovarian Tumors."

Dr. J. R. Ballinger addressed the Physicians' Fellowship Club Auxiliary on January 13.

Dr. Gilbert P. Pond gave a talk on "Mental Health" to the boys of Marcy Center, Chicago, January 19.

Dr. Herbert Rattner addressed the Pre-Medical Pre-Dental Club of Central Y. M. C. A. College, January 20, on "The Skin."

Dr. Lena K. Sadler addressed a joint meeting of Will-Grundy County Medical Society and the Woman's Auxiliary, January 18.

Dr. Gatewood addressed the Academy of Surgery of Detroit, January 12, 1933, on "Carcinoma of the Stomach."

Dr. Alice Conklin addressed the Irving Park Sorosis Club, Chicago, on January 23, "Health of Middle Aged Women."

Dr. Maximilian Kern addressed the Young Married Couples Sunday Evening Club of the Austin Methodist Episcopal Church, January 15, 1933, on "Our Present Knowledge of What 'Glands' Do and What They Do Not Do."

At the annual meeting of the Martha Washington Hospital held January 17 the following officers were elected for the year 1933: Herbert G. Lloyd, president; Dr. Heber M. Goodsmith, vice-president; Beryl B. Collins, treasurer; W. W. Johnstone, secretary; Eugene V. Doron, superintendent.

Dr. Joseph K. Calvin presented a paper on "Some Aspects of Kidney Diseases in Children." at the January 25 meeting of Will-Grundy County Medical Society.

Dr. James G. Carr gave an address on "Treatment of Jaundice" before the DeWitt County Medical Society, January 26.

Dr. M. P. Borovsky addressed the Longwood Mother's Club, January 24 on "Understanding the Adolescent."

Dr. F. O. Fredrickson addressed the Woman's Auxiliary of the Englewood Branch, Chicago Medical Society, January 25.

At a dinner given in his honor at the Drake Hotel, Chicago on Jan. 3rd, 1933, the Honorable Rene Weiller, Consul-General of France, awarded to Dr. Frank Smithies the Cross of Knight of The Legion of Honor of the French Republic in recognition of his achievements with respect Post-Graduate Medical Education in France and in medical science.

News Notes

—H. 72 and S. 146 propose to repeal the present law relating to the regulation of maternity hospitals and to provide for the licensing and supervision of such hospitals by the state department of public health.

—Peoria City Medical Society featured a symposium on fractures, January 17, with Drs. Arthur H. Conley, William Cubbins and James Callihan, all of Cook County Hospital fracture service, as speakers.

—A petition signed by six local medical institutions in opposition to a request for an injunction by the Illinois Anti-Vivisection Society was filed in circuit court, Dec. 28, 1932. The injunction would restrain enforcement of the present ordinance governing the release of animals from the dog pound to medical schools for experimental work in medicine. The institutions signing the petition were University of Chicago, Northwestern University, Loyola University, University of Illinois, Chicago Medical College and Michael Reese Hospital. The petition set forth that if the injunction is granted "a great investment in capital and maintenance will be completely destroyed and the petitioners will be denied one of the greatest means of promoting human welfare known to man." In December, 1931, the city council by an overwhelming majority approved the ordinance authorizing the release of unclaimed dogs to medical schools for humane and scientific purposes.

—At the regular monthly meeting of the Aurora Medical Society held January 5, 1933, the following officers were elected: president, Dr. Imas Rice; vice-president, Dr. R. V. Turner; secretary-treasurer, Dr. C. O. Heimdal (re-elected). The retiring officers for 1932 were, president, Dr. R. H. Graham; vice-president, Dr. C. G. Weller; secretary-treasurer, Dr. C. O. Heimdal.

Deaths

James Gordon Berry, Chicago; Rush Medical College, 1875; a Fellow, A. M. A.; one of the oldest physicians in the city; aged 82; died, January 19, of chronic myocarditis.

M. Arista Bingley, Chicago; University of Illinois College of Medicine, 1898; a Fellow, A. M. A.; aged 79; was killed, January 24, by an automobile, when crossing a highway in Edison Park.

Arthur Le Roy Blunt, Chicago; Bennett College of Electric Medicine and Surgery, Chicago, 1888; aged 76; died, Nov. 7, 1932, of myocarditis.

Bernhard Erp Brockhausen, Freeport, Ill.; Humboldt Medical College, St. Louis, 1869; aged 87; died, January 12.

William Christie, Chicago; McGill University Faculty of Medicine, Montreal, Que., Canada, 1887; aged 70; on the staff of the Woodlawn Hospital, where he died, January 3, of cerebral hemorrhage.

John F. Fair, Freeport, Ill.; New York University Medical College, 1881; and Jefferson Medical College, 1885; aged 77; died, January 2, after a long sickness.

Francis Front, Chicago; University of Krakow, Austria, 1894; aged 65, died, Dec. 7, 1932, in Daytona Beach, Fla.

John Hamilton Gray, Morrison, Ill.; Hahnemann Medical College and Hospital, Chicago, 1883; aged 75; died, January 12, of influenza and pneumonia.

Grant Irwin, Quincy, Ill.; Chaddock School of Medicine, Quincy, 1886; a Fellow, A. M. A.; president of Central States Industrial Surgeons Association; aged 67; died suddenly in his office, January 12.

John Francis Macnamara, Chicago; Loyola University School of Medicine, 1921; a Fellow, A. M. A.; on staff of German Deaconess Hospital; aged 65; died, January 6, of carcinoma of liver and gall bladder.

Augustus W. Mercer, Chicago; Western Reserve University School of Medicine, Cleveland, 1901; aged 65; died, January 2, of coronary sclerosis.

Thomas D. Palmer, Chicago; Northwestern University School of Medicine, 1867; aged 86; died, January 16, of carcinoma of the prostate.

George Elwood Pumphrey, Carthage, Ill.; Keokuk Medical College, 1897; a member of Illinois State Medical Society; aged 66; died, January 1, of pneumonia.

Marvin S. Rice, Aurora, Ill.; Hahnemann Medical College and Hospital, Chicago, 1876; aged 81; died, January 18, suddenly, in his office.

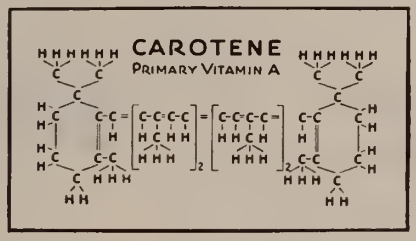
Charles A. Stevens, Chicago, Northwestern University Medical School, 1899; a Fellow, A. M. A.; on the staff of German Deaconess Hospital; a captain in U. S. Medical Corps, twice promoted, he retired in May, 1919, as a lieutenant colonel; aged 61; died, January 3, of cerebral thrombosis.

James Jay Weltman, Chicago; Northwestern University Medical School, Chicago, 1923; member of the Illinois State Medical Society; formerly instructor in physical diagnosis at his alma mater; School health officer, Chicago Health Department; at one time on the staff of the Municipal Tuberculosis Sanitarium; aged 36; died January 3, of pneumonia and cerebral edema.

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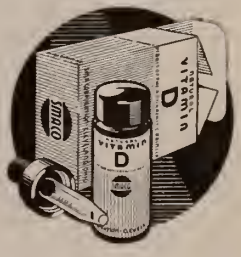
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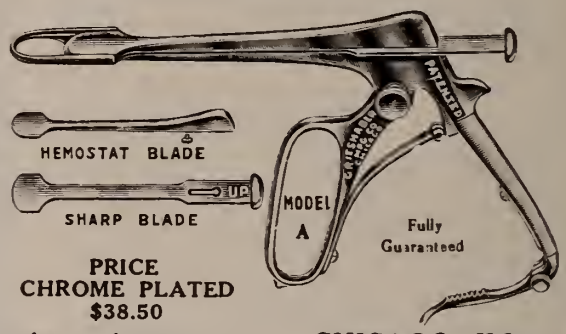
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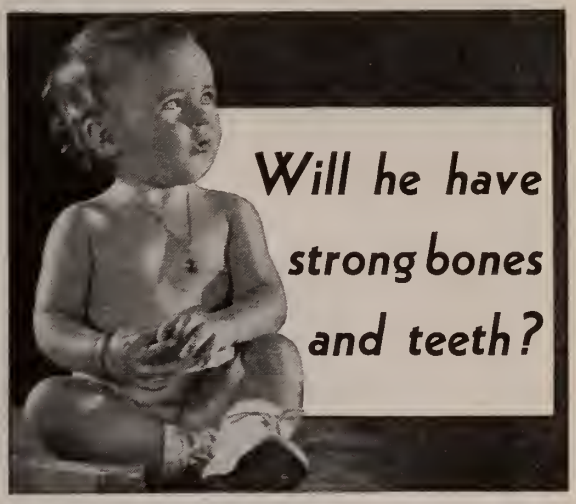
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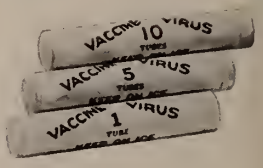
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Editorials

PSYCHOANALYSIS SHOULD NOT BE TAUGHT IN AMERICAN COLLEGES

Barnum was right!

And he proved it more than once. Yet such over-ripe sucker bait as the pish-tush of psychoanalysis has never been equalled since the day that "Phineas T." wishing to get lingering crowds out of his museum so that a fresh audience might enter, hung over a closed door to the street, a great sign reading

"To The Egress **
Take Care."

So everybody opened the door to see the egress, and—found themselves outside, with a pay-as-you-enter facing them on the way back.

It was a great little idea! Almost as great and a whole lot more decent than the sordid, salacious welter parading around in high class consultation rooms under the name of "Psychoanalysis."

A lot better title would be "pseudo-analysis," or, "sexo-analysis," only, and this alternative is one that makes a decent citizenry shudder. The depravity and filth with which is saturated psychoanalysis, or "P. A." as it is often nicknamed, is most revoltingly real dirt. More than Herod, does psychoanalysis achieve a murder of the innocents. In and by and with and from psychoanalysis nothing is clean nor chaste. The whole world is an open sewer and men and women merely floating blobs of pestilence. A macquereau and a panderer profit from the degradation of a victim's bodies. But the psychoanalyst gets fame and fortune from dealing in the nauseating dirt that rots a victim's soul. Veiled in promises, girt with pseudo-scientific knowledge in that unknown terrain—the psyche—psychoanalysis glides forth, a leprous, scabrous entity making into blasphemy the most casual and the most sacred relations of human existence. Psychoanalysis out-pagans paganism in erotic infiltration.

For about half a century now, psychoanaly-

sis has been gaining recognized place in therapeutic procedure. Yet the value of this school continues a moot question even in the minds of the most liberal of medical men. It is no study for undergraduates and few postgraduate men want the filth of Freudism.

Psychoanalysis is stressed by its proponents as a major panacea and practically infallible instrument in the clearing up of nervous and mental disorders. The process of relief is based upon the assumption of three "ground-pillars" in the theory of analysis of the neurosis;—i.e.—

1. Recognition of "repression."

2. Importance of sexual instincts.

3. Transference, which in this connection coincides with the more familiar term of "suggestion."

Resolved to its elements, these are all coincident—Sex and sex alone.

Many alienists frown decidedly upon psychoanalysis as it is best known today—i.e.—the Freud, Jung, Adler schools. Whether this black eye is merited, certain it is that while the milder neuroses such as hysteria, phobias or obsessional states are the principal fields of its noteworthy application, yet its most successful work is observed in those states afflicted with malformations of character, and in sexual inhibitions and abnormalities. While in cases of paranoia or of dementia praecox not much may be said for "P.A.," yet it is asserted that under benign conditions it is an excellent instrument to cope with depressive states. Now Wolgemuth says "Darwin discovered the Descent of man; Freud discovered that there is no decent man," and the pun is no worse than its target.

Indeed, psychoanalysists have been called "moral Voyeurs." And the fact remains that though psychoanalysis' outstanding yet dubious success is in mental cases having a sex bias or basis, which is not at all out of line with the psychoanalytical contention that "pregenital organizations of the libido" or points at which it may become fixated and to which in the event of subsequent repression there may be a return or "regression," are definitely responsible for subsequent neuroses, whose later form is determined by these infantile fixations; and that hence neuroses should be regarded as inhibitions in the development of the libido.

And according to psychoanalysists the world is laved in libido and nothing more.

Freud, Jung and Adler, all of whom are standard authorities on the question of "psychoanalysis," all of whom suckled their first milk of these dogmas from the same source, have all more or less so split on hairline doctrines that they are already "a house divided against itself." Whether psychoanalysis is a branch of medical science that should be included in an undergraduate curriculum is not only a delicate decision but a serious matter for wise judgment. And it is an experiment not to be undertaken but rather to be condemned as by a raven "Nevermore."

Psychoanalysis is like morphine. In wise hands it is an unproven though possibly invaluable aid to materia medica. In the hands of the immature it is a path that can not help but lead to charlatanry or absolute degeneration. Not the least of the evils by which it is at present surrounded are

1. Its adoption as a cure-all by wealthy neurotics.

2. The surface pruriency to the lay-mind in an attempt to digest and to assimilate its terms.

3. Its constant stress and even overemphasis of sex—impulses, inhibitions, license and libido generally.

4. The implantation of evil suggestion and of foul interpretation of what is extraneous by nature to such a nature.

5. The semi-mysticism that surrounds its developing stages.

6. Its intangibility of contacts in its self appointed assertion that it is able to reveal the psychology of the deepest unconscious of mental acts and its almost mechanical dissection of depth-psychology. The results invariably are sex, sexuality and more sex and sexuality.

Psychoanalysis first saw the modern light of day along about 1880-82 in the consulting rooms of Dr. Josef Breuer, a man then about 38 years old and who died in 1925. Charcot and Pierre Janet in France had not as yet done their memorable investigations into the origin of hysterical symptoms, when in 1881 Breuer used the first known application of pschoanalysis in relieving of hysteria a young girl who had been nursing her sick father. To Breuer it occurred that the symptoms were connected with im-

pressions received during a period of excitement while nursing her parent, so he put her into a state of hypnotic somnabulism, had her search through her memory for these connections, and to live through the pathogenic scenes with no inhibition of the effects that arose in the process. Further details are unnecessary. But when the doctor had had the girl do this, "the severe hysteria, and all the abnormal symptoms disappeared completely."

To which might be added the vulgar comment "That's what they all say."

About ten years later Breuer collaborated with Dr. Sigmund Freud, who has baptized one school with his name and they published in 1895 Breuer and Freud's "Studien über Hysterie." Five years later Freud went on his own and brought out his work on the subconscious message of the dream life of mortals—Freud's "Traumdeuting." And oh! what symbolism dreams have in the Freudian lore! So for the past thirty-two years psychoanalysis has been a branch of therapy little understood, yet well established in the world of psychiatry. Though German born, the subject filtered into Switzerland and from a pair of Swiss, E. Beluler and C. J. Jung, there arose a competitive clinic with that indigenous to Germany and Austria. There was no lack of sexuality in either school but a vast deal of hairsplitting. To get a stomach full of disgust read in Freud's "Neuronsolehre" the case account of "The Father, Little 5 year old Hans and the Pee-wee-maker."

Since the United States, and it might be said also, all English-speaking nations, own a more repressed attitude towards sex ratio and its import than do some of the Teutonic, Latin or Oriental nations, the question is whether we need an imported therapy for an ailment that we need not import. Further the question is as dubitable as to what proportion of modern cases of perversion are congenital or acquired. Certainly the young medico who has not yet found his sea-legs would be better concerning himself with the ills of the body rather than those of the mind until those times when he has so far mastered by clinical experience the vagaries of the physical organization, that he is able to compute with fair maturity of judgement where *physiology* ends and *psychology* begins. Is the average young medic to have his mind filled with such junk that everytime he ascends a flight of stairs he must recognize them as a "coitus symbol?"

Briefly epitomized the saliencies of psychoanalysis according to the accepted Freud-Jung standards include:

Breuer's attempt to explain his discoveries by the theory of *Catharsis,* or the hypothesis that "hysterical symptoms" originate through the energy of a mental process being withheld from conscious influence, and thus diverted into bodily innervation or "conversion," so that an hysterical symptom would thus be a substitute for an omitted mental act, and a reminiscence of the occasion which should have given rise to that act. So that, with this hypothesis, recovery can only be possible as the liberation of the affect that had gone astray and of its discharge along a normal path or "Abreaction."

Now this cathartic treatment gave "desired results," but it was found by Breuer that they "lacked permanence" and were dependent upon *the personal relation between patient and physician.*

It took Freud to find a way out. He altered the technique. Hypnosis was replaced by the method of free association, and the term "Psychoanalysis" invented to fit the process. A smart process, too. Through the years it has managed to smelt much gold of the realm out of the pay-dirt of the patient's makeup for the physician!

Since then two definitions are ascribed to the term—the first is the especial psychoanalytic treatment for nervous disorders and sex obsessions, and that science of unconscious mental processes also termed depth psychology. All of it is strong meat for the immature mind. And far too much of it, far too gamey to please even the sanely mature or the maturely sane. Very few men are willing to admit that their hats are symbolic of female genitals or that their neckties signify the male genitals.

All psychoanalytic treatment, no matter what its variation, takes heavy toll of physician and patient alike. Lengthy, special training is a pre-requisite for every doctor in the science, though neither Freud, nor more latterly Jung insist that an aspirant for psychoanalytical practicing honors must be a graduate in medicine. As a matter of fact Jung licenses more than a few laymen unless some of his American

practitioners are prevaricating. Which certainly should count against a psychoanalysis course in any reputable medical college. To say nothing of having it instilled in you daily that your umbrella, owned or borrowed, is but a symbol of the phallus. So you see that if a young doctor with his hat on his head and his umbrella in his hand is going upstairs, he has female genitals on his head, the male genitals in his hand and they are both working overtime on the coitus symbol.

What a dogma for the doctor!

Then, too, each patient's mind must be long and painstakingly explored.

You are told that results depend upon the replacement of unconscious mental acts by conscious acts, this replacement being done by overcoming internal resistances in the patient's mind. Quite often these are instinctive resistances of the mental censorship function. Yet such replacement is operative only in so far as that process has significance in relation to the disorder under treatment. All of which makes you sympathize a bit with the learned commentator who wrote "Psychoanalysis in general is like dream interpretation in particular,—a via regia to the 'Unconscious' of the psychoanalyst, so I should suggest spelling it in future, 'psycho-anal-ist.'

"They have far too much to say on Anal-erotic character traits."

From the standpoint of depth psychology, there are in psychoanalysis three perspectives—the dynamic, the economic and the topographical.

Briefly outlined,—

The Dynamic,—apart from the reception of external stimuli derives all mental processes from the interplay of forces that assist, combine or compromise with each other. Originally of organic origin, and in reality, instincts, these forces possess an immense somatic persistance or reserve of power or repetition-compulsion and are represented mentally as images or ideas with an affective charge or cathexis. Though the theory of instincts remains an obscure subject, an empirical analysis affords two groups—the ego instincts, relating to self preservation and the object instincts that are concerned with relations to an external object. Now the social instincts, even in psychoanalysis are not regarded as elementary. Concealed behind the ego and object instincts both, psychoanalysis places two fundamental instincts,—Eros or libido, the instinct striving for ever closer union; and creation; second, the instinct of destruction leading to the dissolution of what is alive. And to be abridging colloquially, "psychoanalysis" might be called "sex analysis" for the psychoanalysist believes in giving your libido its due.

The economic:—This regulates the course of mental processes by the pleasure-pain principle, with pain related to an increase of excitation and pleasure to its decrease. As it develops the original psychoanalysis principle undergoes a modification in reference to the external world so that the mental apparatus accustoms itself to temporary toleration of the symptoms of pain and habituates itself to temporary postponement of the pleasures of satisfaction. For "psychoanalysis" acts on the hypothesis that mental representations of the instincts own a cathexis of definite quantities of energy; that hindrance of any damming up of these energies is one purpose of the mental apparatus as well as keeping at a minimum point the total amount of the excitations to which it is subjected. You see here the "repression" principle. Something of this sort is sold by fortune tellers in their recipes as to "how to prolong the pleasures of copulation."

The Topographical:—"Psychoanalysis regarding the mental apparatus as a composite instrument is out to see at what points the various mechanical acts take place. The mental apparatus is divided into

The "id"—the reservoir of instinctive impulses; processes all unconscious.

The "Ego"—that most superficial portion of the "id" and the part modified by the influence of the external world; consciousness, the function of outer layer as this is concerned with the perception of the world at large.

The "Super-ego"—this is the development of the "Id" and dominating the ego, represents the inhibitions characteristic of man.

Justification of much of "psychoanalysis" arises, say its adherents from the discovery that dreams, and mistakes and general parapraxes of normal men own the same mechanism as neurotic symptoms. But it is in the interpretation of the symbolism of these dreams that psychoanalysts dig up the dirt, the mire and

the slime and spatter it far and wide with an ingenuity that is little less than black magic and goats. "That way madness lies."

"Psychoanalysis" holds that the unconscious censorship of the mind makes repressions that yet are not destructions of mental tendencies that display their influences by circuitous paths and that from this indirect or substitute gratification of these repressed impulses arise painful neurotic symptoms. In other words the world is not waiting for the sunrise but for the phallus and the kteis,—and how!

Now since for cultural reasons the severest repression falls upon sexual instincts, "psychoanalysis insists that neurotic symptoms are oftenest substitutive gratifications of repressed sexuality. "Follow your impulse and you will be right" is a tenet laid down by a famous "psychoanalyst" to a Chicago patient. If you want to be a pervert be a pervert, just so long as you are sexy and suit yourself is the idea. "Psychoanalysts" insist that.

It is incorrect to think sexual life in man does not exist prior to puberty.

That signs of sex life can be detected from the moment of ex-uterine existence. (Suckling is said to be one of the first.)

That the early period reaches its culmination at the end of the fifth year.

That the latency period extends from that time until puberty, that climaxes the second period.

That this double onset of development is exclusive with man.

That the subsequent development of character or of disease depends upon an individual's inherited sexual constitution as well as the totality of all childhood experiences.

That the "primacy of the genital zone" is attained only after a long and involved period of development and that all of this affects the mental apparatus.

That a "neurotic inhibition of function depends upon quantitive considerations.

That the conflict of a child with his parents is a sex conflict, and that the Oedipus complex, so harrowingly detailed by O'Neill in his "Mourning Becomes Electra" is exampled in the life and woes of many a neurotic.

That "reactions against the instinctual demands of the Oedipus complex are the source of the most precious and socially important achievements of the human mind." Freud and Jung, however, mince no words nor waste any syllables in their contention that there should be open recognition of the fact that many neurotic disturbances come from repressed sexual desires between parents and children or other incestual alliances. Modern America looks with less favor even on legends of incest than do those older lands from which "psychoanalysis" has emanated. Do we want such engrafted theories? Are they true of the American nation, or are we not of a different mental contour just as our craniums measure differently than those of the African negroids?

Psychoanalysis pins much faith in the idea of "Transference." This term covers a salient peculiarity of many neurotics. Every physician is familiar with the neurotic's development of an emotional attitude towards the physician. —sometimes of affection, sometimes of hostility. Psychoanalysts say this evolves from an Oedipus complex that has been repressed, and that proof of the fact that former childish dependence has not been lost is evidenced by this transference of dependence and affection or rebellion. As transference coincides with suggestion, by making use of this instrument the psychoanalyst induces the patient to overcome his internal resistances, do away with his repressions and secure a second or adult education that will act as a correction to the education secured as a child.

The farther you go into the subject the more surprises you get. By and by you learn how the "psychoanalyst" insists upon the sublimation of some instincts as a dominating influence over others, and it is surprising still to observe how many ways there are in psychoanalysis to see to it that the instincts of sex shall be sublimated to the nth degree. As a matter of *fact the sublimation of sex receives its highest accolade in the neat system of psychoanalytical symbolism by which a sex symbol is observed in every act, conscious or unconscious and in all creation, animate and inanimate.*

What of the mind steeped in psychoanalysis that is taught to see a phallic symbol in everything the eye or the hand or the body touches? When it is worked out by Freudian theories—even though mentioned first as the symbolology of dreams that "a hat signifies the male genital

symbol, and a room the female genital symbol, a bureau drawer also the female genitals, etc., etc., ad libidum ad libido'' does that not seem pabulum of far too gamey content for the youthful medico seeking how best to serve his fellow man? When you are taught in the Freudian mysteries that a desire that may seem evil at its outset will prove good in the end if you feel at the time that it is your desire and if you follow it at the moment of excitation, what, let it be asked is there in such psychology that youth can cull the grain and throw aside the chaff? Truly the line between psychiatry and charlatanry needs a bivouac of vigilantes tried and true.

And it is well to remember ''A little learning is a dangerous thing. Drink deep or taste not the Pierian spring.''

The obvious fallibilities of psychoanalysis in its present state of development would seem to be a tendency away from the strictly scientific and towards the emotional, the charlatan and the monetary. Mankind generally in this day and age wishes to yield less to that sexuality that psychoanalysts demand shall be ceded and it remains to be proven whether the psychoanalysts or the preachers are right as to what constitutes that which ''as Caesar's shall be rendered unto Caesar.''

To the average American physician it would seem at present that there are other courses needed in the medical curriculum that are far more important and far more American than psychoanalysis, unless the introduction of such a chair could prove the fallaciousness of its doctrines as an elemental unit in the machinery of American life. After all we are basically a nation of home-makers and home-lovers rather than one of exotic perverts and prostituted exhibitionists.

The danger to us lies in our credulity. An American will try anything once, especially a remedy, real or fake, for real or imaginary bodily ills. We are a nation of patent medicinists, as every physician knows. We are a nation that as individuals admit no inferiority to any other man, and we like to dabble in big sounding things. So psychoanalysis goes over great. To begin with it is ''imported.'' Our own native psychologists do not hand out such pabulum as the Swiss and Austrian experts nor do they win the rabid yet moneyed following of those men who would debase the moral outlook under the pretense of mending the body and patching up the mind. Freud's teaching has been stigmatized as ''inherently absurd'' and his whole scheme of treatment accused of being ''misshapen phantasy.'' Freud's propensity to the sexual is shared by his fellow psychoanalysts. In the final analysis it all reminds you of bad little boys writing dirty words upon the barn. It may make crazy folk sane and sick folk well but it seems a little doubtful.

CORPORATION PRACTICE OF MEDICINE IN ILLINOIS DECLARED ILLEGAL

Out of the conference rooms of medical societies and into the courts of the land go the arguments and the decisions as to the rights of a corporation to practice medicine.

In one of the first legal attacks in the crusade to drive corporations from the practice of medicine, the advantage went for the nonce to the medical profession and hence, it is to be hoped that the practice of medicine by a corporation was dealt its death blow Saturday, February 25, in the Superior Court of Cook County, by Judge Charles H. Miller, of Benton, Ill., a circuit judge from the southern part of the state, sitting in the Superior Court in the place of Judge Frankhauser, who was ill. The Court decided that the practice of medicine could not be carried on by a corporation even though the administration of the treatment was made for the corporation by physicians duly licensed under the Medical Practice Act of Illinois.

The suit was brought in the name of the People with Doctor Thomas Dyer Allen as relator, and was a quo warranto proceeding, instituted in the name of John A. Swanson the then state's attorney, for whom Thomas J. Courtney, the present state's attorney, was later substituted. The defendant in the case was the American Society for the Conservation of Vision, Inc. This corporation maintains offices in Chicago for the administration of treatment to persons suffering from faulty vision. Its treatment is administered by a physician duly licensed under the Medical Practice Act in Illinois. The contention of the People was that the Medical Practice

Act provided only for the administration of medical treatment by natural persons, and that the implication of the statute was that corporations were not to be used in maintaining offices for the treatment of diseases.

Harry Eugene Kelly represented the People and the Relator. John J. Kelly represented the defendant. Angus Shannon appeared as a friend of the court, and made an argument in the case in behalf of the United Medical Service, Inc. Frank J. Link appeared as a friend of the court in opposition to Mr. Shannon's contentions.

The case was presented on an agreed statement of facts, because there was no controversy on the question of what the nature of the corporation practice was.

The decisions of the various states, New York, Iowa, Colorado, California, Nebraska and Missouri, and several others, were considered. The contention was made on behalf of the defendant that it was merely conducting the business part of the maintenance of its office and that that was separate from the application of remedies by physicians employed for that purpose, in line with the decision in the Nebraska case. Counsel for the People took the view represented in the California case, that the practice of medicine is not to be divided into two parts, a business side and a professional side, but that it is a single unit, and that the law relative to the practice of medicine deems the public concerned with the payment of, and contract for, medical services as well as the physician's diagnosis and treatment of disease.

Judge Miller, in substance, followed the California doctrine, announcing that he was unable to divide the doctor's professional duties into business and professional parts, and that in his mind the professional duty was one thing, including all relations with the patient, financial and medical.

Accordingly, Judge Miller found that the defendant was guilty of "usurping the franchise of practicing medicine" by holding itself out in an office for the reception of patients, and by having them treated by a licensed doctor in its employ.

Judge Miller found the society guilty of unlawful practice and fined it $25, thus setting a precedent in the courts.

While this case is being taken to the Supreme Court by the defendant, action will probably be well under way against the recently incorporated "United Medical Service, Inc." at 25 East Jackson Boulevard, at the head of which is Dr. Joseph G. Berkowitz, long connected with the Public Health Institute, a pay clinic for venereal diseases owned and operated by a corporation of business men who employ a medical staff.

Also a suit for injunction is pending against the United Medical service by Dr. Frank J. Hurlburt; its members have been branded as unethical and called to account before the Chicago Medical society.

Editor's note: This court action is in line with what organized medicine in Illinois has been working at for 12 years. In the issue for November 1932 of the Illinois Medical Journal, attention was called to the fact that Illinois has been alert in legislative protest against corporations practicing medicine but the bar has done better for itself in professional protection: that the justice of a law inhibiting corporations from practicing medicine has been up for demonstration more or less continuously before the legislative body of the State of Illinois by Illinois doctors for twelve years.

Few lines of legislation have been more urgent. None is more pressing now. Of no active economic condition are physicians more acutely aware.

Failure met repeated efforts to secure the desired legislation. This is not necessarily calamitous. The writer continues convinced that if legislation now on the statute books can be and is enforced that the laws already enacted are sufficient. As in many other instances it is enforcement of the existing statutes rather than the enactment of new laws that is indicated. And enforcement, there is the rub.

For several years this has been said repeatedly in the editorial columns of the Illinois Medical Journal. Enforce the legislation we have now and stop the practice of medicine by corporations.

Among the active measures taken by doctors in Illinois to prevent corporate practice of medicine may be mentioned;—

Senate Bill No. 362 introduced in 1921 by the late Senator Wheeler;

Senate Bill No. 291 introduced in 1927 by Senator Mason;

Senate Bill No. 231 introduced in 1929 by Senator Searcy of Springfield.

THE DOCTOR IS THE REAL "FORGOTTEN MAN"

For some months we have been hearing much of "the forgotten man." This catchy phrase can be, and has been, variously interpreted. To one group it means the farmer; to another the white collar man; to another the politician of one hue or another.

When boiled down, concentrated and analyzed to the last degree, we feel safe in claiming that "the forgotten man" can mean nothing but the man of medicine.

For some years the practice of medicine has been going through a critical period, a period that has been almost catastrophic in its dire effects. The invasion into the domain of legitimate medicine of the various cults practicing their unethical but very efficacious advertising methods has seriously hampered the legitimate physician. Bound by the iron dictates of his code of ethics he has been placed at a serious disadvantage. To this grave handicap has been added the great multiplication of free clinics, hospital centers, tuberculosis and infectious sanitaria, and a host of other agencies for the free treatment of patients, many of whom are amply able to pay a fee. The activities of the social service agencies has done much to alleviate this evil, it is true, but there is much more that can and should be done.

Always the last to be paid, largely because of his unbusiness like methods and the general ignorance of the medical man concerning the principles of medical economics, today, he is not being paid at all because of the deplorable effects of the period of financial depression. Detail men who are constantly entering the offices of the doctors are unanimous in asserting that there has been a remarkable and very serious slump in office practice everywhere. It is an open secret that a large number of doctors are months behind in their office rent, and that many of the large professional buildings have been carrying many of their tenants for varying periods, rather than close their offices and thereby empty the buildings. Many physicians who were for years specialists in various lines have been compelled to return to general practice in order to make ends meet in the struggle for existence. One of the detail men only recently told us that it was pathetic to know the large number of doctors who did not know where their next dollar was to come from.

Here is a great evil that should and must be met. While Congress is appropriating vast sums to meet similar exigencies in various business classes, notably the farmers, the railroads and the banking institutions, nothing is being done to alleviate the great suffering in the noblest of all professions. And the deplorable fact is that the suffering medical man, because of his inherent pride and fear of imperiling his professional standing, as well as his proper aversion to entering the bread lines is heroically bearing his trial without uttering a word.

Are we not justified in claiming that the medical man is the real "forgotten man?" Are we not correct in calling attention to this very evident and serious social condition? No doubt there are millions of citizens who do not realize that the great medical profession is facing a grave crisis, and who would take prompt and effective action if their attention were called to the deplorable state of affairs.

DOCTORS COMPLAIN BITTERLY OF ANNOYANCE FROM MEDDLING BUREAUCRATIC POLITICALLY SUPERVISED INSPECTORS

Mail after mail brings to this office protests from the profession at large over politically supervised inspectors who come meddling around to find out this, or to record that or to get statistics upon personal, private and intimate details of tax-paying, law-abiding citizens whose privacy has become the legalized dump heap for no end of political ragpickers.

There is nothing surprising about this state of affairs. It was bound to come as a result of bureaucratic red tape with which the United States has been increasingly enmeshed. Unless the doctors of the country make up their minds to protest with votes instead of with voices (to which nobody hearkens, not even the policemen), it is going to be so much worse that there will not even be freedom of com-

plaint left as even a partial privilege. The condition that is aggravating everybody right now is exactly the one that the editor of this Journal as been prophecying would maintain, unless the profession took steps to stem the tide of over centralized control. For a quarter of a century this condition has been inveighed against, warned against and even prayed against. The editor has been a nuisance to himself in his persisteney of preachment that dates back to the early years of this century.

In the issue of the ILLINOIS MEDICAL JOURNAL for September, 1911, the present editor prophesied the development of the present economic conditions confronting the profession. This propheey was repeated again in 1913, 1914, 1915 and annually thereafter, and reiterated again and again in public lectures and in editorials in the interval up to the present day. At last medical journals all over the United States now enlist in this same fight for those rights of the medical profession that so drastically affeet the public welfare. Foundations practieing medieine, corporations entering into the practiee, also university medical schools competing in practice with their own alumni, endowed and partly endowed institutions and pay clinies in the practiee of medicine, and an adaptation of the "ehain store idea" in medieal praetice and in hospitalization, lay dictation of medical practice, legislative fiat in the practice of medicine, overstandardization and too much centralization of power in Washington, in state capitals and other general governmental units, all these and hundreds of other similar menaees today oeeupy much editorial attention.

TIME IS ARRIVED FOR THE MEDICAL PROFESSION TO CLAIM A REASONABLE SHARE OF ECONOMIC FREEDOM. WE ARE IN THE BONDAGE OF DISCRIMINATORY LAWS.

Shameful though the admission may be, we are in the bondage of diseriminatory laws, to an unprecedented extent. Time is arrived for the medieal profession to elaim a reasonable share of economic freedom, and to protest effectively and by the ballot against further meddlesome and restrictive legislation.

How else than by political maneuvering can these advantages be secured? There is no question of the power that physicians possess to command relief by this method. The voting booth is uncanniły specific. It remains to be seen how soon the profession uses this power and influence or what longer delays will ensue. If each of us waits for the other to do something, accomplishment is impossible. If each of us as a man and eitizen realizes the necessity for individual effort, then results will follow quickly and effeetually. Our vast ehorus of voices and our latent power must be concentrated in one single note of which the unified efforts must seek as an end that medicine in America may be profitably and pleasurably praeticed by individual physieians, freed from the bondage of discriminatory laws, relieved of the burden of inequitable taxation, and liberated from the coils of purposeless technicalities.

WE HAVE TOO MANY LAWS

In his minority report to the Wickersham commission, Henry W. Anderson writes: "They (the American people) have created the largest body of laws, and the most complex system of government now in existence, as restraints and control upon individual and social conduct, but every stage in their development has been characterized by a large and ever increasing degree of lawlessness and crime."

There is too much tendency in this country now to be spoon-fed. All that any government ean do will be infinitesimal compared with what business can do for itself.

PATERNALISM IS RUNNING WILD IN AMERICA

There are many imperfeetions in human kind and in the relations existing between men. Yet why should the Government, immediately upon belated perception of these imperfections, presume that a eure be effected only through its panacea of law-making? We agree with ex-Senator Reed when he said "There are some who believe in this sort of thing, who think the government should regulate everything. They believe that if congress were to pass a bill directing all men to be happy, every human face would hereafter wear a smile of perpetual joy. These enthusiasts seem to believe we can disregard human nature, the experienee of ages, the environments of life, the condition under which God Almighty planted human beings on this earth, and all that we have to do is to pass a bill, and all will be serene and lovely. Unhappily the epitaph of all such ventures is failure! failure! failure!"

Governor Albert C. Ritchie of Maryland, an outstanding candidate for the presidency before the American people, said in a recent interview in the *Chicago Sunday Tribune* of November 29, 1931:

"Our government has become the most regulatory in the western world, outside of Russia and Italy. Inspectors and spies and official regulators follow the 100 per cent. American from his mother's bosom to his last resting place in the bosom of the earth.

"Out of the very necessity of things, centralized government becomes a government of bureaus, and a government of bureaus becomes a government of clerks and stenographers, of field agents, inspectors, and red tape. And one bureau breeds another.

"The federal government must be deflated. We have inflated it at the expense of the states. When you weaken the parts you weaken the whole."

BUREAUCRACY

In his talk before the Illinois Manufacturers' Association in Chicago, December 8, 1931, Governor Ritchie said:

"Think of our army of federal employees now rapidly approaching the million mark, with a cost of government that has grown fifteen times as fast as our population and is now running into astronomical figures, imposing a burden of taxation that is intolerable. Private business which foots the bill does well to ask itself why, wherefore, whence and whither.

"One hundred and fifty bureaus and endless commissions prey upon you and feed off you. Twenty-five different grades of federal officers scattered through the various departments can hector you, arrest you and ruin you. Not a phase of your life from the cradle to the grave, from the cellar of your home to the wallet in your pocket, into which they cannot pry."

"EXPERTS CLUTTERING CAPITAL"

Warning the manufacturers that a superstitious belief in the efficacy of commissions of "experts"—he gave that word a withering touch—is cluttering the machinery in Washington, Mr. Ritchie said:

"There is too much faith in government as such, and too little in self-operating social forces and ideals which among a free people can produce more progressive results than can any government.

"A government might be omnipotent, but it cannot be omniscient. What is done in government is always done by mortals, by somebody in the flesh, who has all the weakness of the flesh.

"The common good can best be attained by the steady flow of natural forces and the free play of our common liberties, with the least possible interference by congresses or kings."

And to quote President Hoover according to the *Chicago Tribune* Press Service:

"Organized minorities," Mr. Hoover said, "have surrounded congress with a confusing fog of opposition," and as a result "the inchoate voice of the public gets nowhere but to swear at bureaucracy."

FOR STATE RULE BY STATES

Mr. Hoover said that while some federal encroachments on state authority have been necessary, many functions now performed by the federal government would much better be left to the states.

The *Washington Star* a few years ago remarked: "There are now 10,000 operative federal laws; 500,000 active state laws and 5,000,000 city ordinances in force, with 200,000 law-makers constantly grinding out more." The paper also quotes William M. Bullitt, in the *Journal of the American Bar Association*, as stating that the laws of the forty-eight states in 1923 filled 3,576 volumes of 1,592,000 pages.

Practically every form of human activity, however natural or harmless, is regulated by law, and there are insistent demands for further regulations.

James M. Beck, representative in Congress from Pennsylvania and former Solicitor General of the United States and America's outstanding constitutional lawyer, at the Chicago Board of Trade dinner, November, 1931, warned of sovietism in the United States bureaus and called for return to old simplicity. Speaking of State Socialism he remarked the folly of converting our limited government, with its constant recognition of the value of individual initiative, into a bureaucracy, which destroys the individual, of which the Soviet Republic, so-called, is the final and greatest expression. He called upon the coming congress to "bury the present experiment of governmental social-

ism beyond the possibility of resurrection'' and also asks that a ''patriotic coalition of the leaders of both parties be formed to save America from the destructive follies of State Socialism.''

''What can save America from this fate? Only an awakened sense of constitutionalism in the hearts of the American people. They should look to themselves and not to governmental agencies for salvation.''

When a new bureau once fastens its tentacles on the treasury, its hold is like that of a dead hand. Establishment of the Commerce Commission, says Mr. Beck, ''was followed by a long series of statutes to create governmental agencies to regulate the business, and even the life of the individual, until today there are 150 such bureaus in the federal government and the scope of their activities ranges from the cradle to the grave.''

UNITED STATES PERILS BUSINESS FUTURE

R. V. Fletcher, Vice-President and general counsel of the Illinois Central Railroad, before a meeting of The American Railway Development Association, Chicago, 1931, said:

''Let the American people awaken to the danger of drifting into a condition of bureaucracy which will stifle all our initiative, ending that force which has made our nation great,'' Mr. Fletcher warned. ''The entry of the government into private business is the most important thing holding back the growth and progress of the railways.''

He traced the growth of this interference in business, pointing out that it first started with the railroads and that it has gradually grown until it now affects some 160 industries, either through complete domination or partial control. It has been especially virulent, he said, during the last ten years.

NEURODERMATITIS OR IRRITANT DERMATITIS?

HERBERT RATTNER, with comments by WILLIAM ALLEN PUSEY, Chicago (*Journal A. M. A.*, Dec. 3, 1932), presents in detail the case of a young man in whom, two weeks after he married, an acute dermatitis on the face, neck and upper half of the body developed. He had a psychoneurosis, an anxiety state, and it was assumed that the dermatitis was a neurogenous dermatitus. It was subsequently shown that the acute dermatitis was excited by perfumed cosmetics which his wife used. Exception is taken to the use of the term neurodermatitis for a so-called dermatitis of neurogenic origin, as it is confused with the entity neurodermite (Brocq).

THE SHIFT IN THE PRACTICE OF MEDICINE THAT MAKES THE MODERN PRACTITIONER ONLY A CRIPPLED PART OF A GREAT COMMUNITY MACHINE

When such a venerated and venerable practitioner of medicine as the late Dr. Frank Billings finds it necessary to take to the rostrum to inveigh against the mechanistics rather than the medicine of the profession to-day it is time for doctors generally to ponder on what he says.

This Past-president of the A.M.A. not only knew what he was talking about but he was not afraid to talk. Knowledge and a clean conscience as well as an honest fear for the future of the profession led this scholar and scientist to the pronouncement of the warning against the ruthlessness and widely spreading evil of the shift in the processes of the practice of medicine that tends to make the modern practitioner only a crippled part of a great community machine with many intricate specializing gadgets instead of a great and inefficient individual machine of protean service.

There cannot be too much reiteration of Dr. Billings' insistence that ''The value of the application of group practice is limited. I believe that this true. Ostensibly the group is formed for the avowed purpose of providing all patients with an accurate diagnosis and efficient treatment. This is made possible through the services of clinical and laboratory specialists and available equipment to obtain a precise knowledge of the physical and functional condition of the patient and to afford efficient general and special treatment, including hospital care, if that is deemed necessary. First, let us inquire how many patients of an average community require the application of these precise methods of diagnosis to arrive at a true understanding of the real condition, and how many of these patients require hospital care. Based on long experience in consultation and in general hospital and private practice, it is my opinion that a correct anatomic and functional diagnosis can be made in from 80 to 85 per cent. of all the patients of an average community by a qualified, industrious, painstaking general practitioner by the sole applica-

tion of the trained mind, the special sense, the hands and an always available simple laboratory equipment. Likewise, approximately 80 per cent. of the patients will receive efficient management and treatment as ambulatory or house patients. Of course, it is advantageous that every hospital, with the possible exception of some very small or special institutions, should have the necessary laboratories, equipment and trained technicians to make these precise examinations and to afford adequate treatment of the few patients who really require their use.

"The truth is, the splendid knowledge which modern medicine has made available in the diagnosis and treament of disease is misapplied frequently, with unfortunate derogatory effect on the public and the tendency to demoralize some members of the medieal profession. This method of practice and the false impression gained by the public through private and public group medical and surgical service with the usually attendant high cost, are tantamount to commercialism. The public is slowly but surely becoming aware of these conditions in medieal practice. Evidence of this point of view of the public is expressed by lay people in cities and in the country. Frequently the best families of the city inquire whom they may secure as a family physician. In this connection we must remember that the splendid character and accomplishments of the United States government are due in no small measure to the character-forming faetor, the family home. The modern tendency in the cities, especially among the foreign-born population, is to seek tenement habitation which tends to minimize the value of family life and to disregard the responsibilities of citizenship. This tends to engender the worst forms of socialism, and disregard of individual and community reponsibility in the observance of the laws of sanitation, and also to promote disease and poverty. The future safety, prosperity and health of the people and the maintenance of all the benefits which this republic affords demand the preservation of the character-forming family home.

"As a faetor in this necessary principle of community welfare, the family physician and his domiciliary visits are essential. It is recognized that the general practitioner, both in the city and in the country, laeks sufficient hospital facilities in the care of his patients. This lack is evident in some of the rural districts of practically all the states of the Union. Some feasible constructive program should be adopted which will afford justice to the taxpayers and to the members of the medical profession, and which will provide better hospital and diagnostic facilities where they are needed. We must, however, keep in mind the fact that a majority of patients do not require the application of unusual and refined methods of diagnosis and also that a majority do not require hospital care."

DETOURS AND MUDHOLES IN GROUP HOSPITALIZATION

Modern Hospital Magazine under date of February 15th comments editorially how hospitals must avoid detours into commercialism. We quote:

"The president of the Medical Society of the County of New York in his inaugural address last month made the following statements: 'No other proposal that has been put forth to reduce the costs of illness has the practicability of the Hospital Information and Service Bureau's plan for the group purchase of hospital care. If the hospitals undertook to provide this type of coverage, it has been computed that they could, without loss, supply twenty-one days of semiprivate care for an annual charge of ten or twelve dollars. The premium covers all institutional expense except medieal service, special nursing and blood transfusions. . . . One of the major virtues of this proposal for group provision of hospitalization is that it does not interfere in any way with the freedom and privacy of the relationship between doctor and patient. . . . The Medical Society of the County of New York is prepared to bend its efforts toward the successful application of any practicable, self-supporting scheme to reduce the costs of hospital care to the middle class.'

"Hospitals should be gratified at this expression of medieal opinion, which contrasts with the recent obstructive attitude in the neighboring city of Philadelphia, of which the *Philadelphia Record* said editorially in its issue of January 21:

" 'The doctors have a perfect right to oppose any such schemes as these. But they

have these rights only if they present plans of their own for coping with the serious situation which these projects were designed to meet.

" 'We know that 12,000,000 Americans can afford no medical attention whatever. We know that to at least 50,000,000 more serious illness means financial distress if not actual loss of home and life's savings.

" 'These human beings must be cared for. Some means of squaring their plight with the interests of the hard-hit physicians must be found. Some means will be found.'

"Hospitals should not be diverted from their purpose of trying out plans of importance to themselves and to the public because of the fear of something new or because voices are raised pointing out a long succession of possible evils. Hospitals should look to their own state and national bodies for the formulation of principles under which group hospitalization should proceed, principles such as will control real or supposed dangers. It is wise to avoid unnecessary detours and not to stall because of mudholes.

"The very importance and timeliness of the plan of group hospitalization have given rise to issues that hospitals must consider carefully. There is the danger of commercialism on the one side as well as that of obstruction on the other. The prime reason for any group hospitalization plan is the same reason that called hospitals into being, namely, service to the sick. A group hospitalization plan should enable thousands of persons to pay for service in a self-respecting way who now must receive it as charity or who contract debts which they cannot pay in whole or in part. The mere fact that thousands of people feel the need of making provision for the expense of a possible stay in a hospital opens the door of opportunity to the commercial agency and sometimes the commercial adventurer. There seems to be a growing number of this brood who for their private profit are trying to sell group hospitalization to individuals and to enlist hospitals in their enterprise. 'Four cents a day will do it' annouces the sales literature of one organization. Perhaps these promoters cannot be put out of business. But they can be avoided or controlled.

"It is well for hospitals to remember that in a city of any size where there are several hospitals, no institution can wisely undertake group hospitalization alone. It is well to remember that skill and experience are necessary in order to organize a plan so as to secure the actual participation of wage earners and other employed groups or organizations who will be the beneficiaries of the plan. The skill and experience of men who know how to organize and get such a plan under way must be paid for, but the important point is to avoid placing the control of the plan in the hands of any group not motivated by the spirit of the hospitals themselves—public service. Hospitals must avoid detours into commercialism which are likely to add 50 per cent to the cost to the patient and to involve promises without performance."

DOCTOR WILDER, DEAN OF OPHTHALMOLOGISTS

The Eye, Ear, Nose and Throat Section of the Illinois State Medical Society at the Annual Meeting in Springfield complimented Dr. William H. Wilder of Chicago, the Dean of Illinois Ophthalmologists, by holding their meeting in his honor.

At the last moment Dr. Wilder found himself unable to be present owing to a serious illness in his family.

A handsome specially bound copy of Religio Medici inscribed with the autographs of all the members of the section was presented to Dr. Wilder.

Following are the addresses made at the annual dinner of the section held at the Abraham Lincoln Hotel:

Dr. Michael Goldenberg: Back in 1908 when the late Dr. Beard was chief of staff of The Illinois Charitable Eye and Ear Infirmary I was assigned to Dr. Wilder's service. I recall very distinctly reporting to him on the second floor as he came out of the dark room. After a few preliminary questions, he asked me if I knew anything about ophthalmology. Having just passed a civil service examination I felt that I knew much, but for once expressed myself with the rather modest reply; that I could tell the difference between a swollen and a cupped nerve head. This reply brought a quizzical smile to Dr. Wilder's features and I was put to work. I soon discovered that I did not know

quite as much as I thought I knew and than an opportunity to learn now presented itself that I must take advantage of. That Dr. Wilder is a great teacher, every young man who has come in contact with him knows and appreciates. I found this out very early and as a result I was always very close when any case was discussed. He possesses that happy faculty that all successful teachers should have, that of simple explanation.

His systematic method of examination, attention to minute detail and analysis of these minutiae, tearing them to pieces as it were and then gradually putting them together was an inspiration to me. His clinical judgment and surgical technique we all recognize and I am quite sure his success can be largely attributed to these factors plus the inherent qualities necessary for such success. His preoperative and postoperative care of a case was to me the natural manifestation one may expect of a skilled workman who takes pride in his finished product. It was not uncommon for Dr. Wilder to work at the Infirmary until very late in the afternoon, probably at the expense of his private practice. He was my chief from 1908 until he resigned from the Infirmary staff and I naturally feel deeply obligated to him and possess that reverence that I feel a student should have for his teacher. I am quite sure what little ability I have disclosed in ophthalmology or surgery is largely due to the training I received while working under him.



WILLIAM H. WILDER, M.D.

Dr. Harry S. Gradle: It is rather a painful pleasure to be called upon in this capacity, for two reasons; In the first place because Dr. Wilder is not here; in the second place, it is painful to inflict extemporaneous remarks upon this or any audience. However, I am very pleased to add my tribute to Dr. Wilder and to his ability. He was graduated in Cincinnati forty-eight years ago, and later went to England and served his apprenticeship under Nettleship for two years, during which time he developed the habits of keen observation that he has retained all his life. Later he came to Chicago, worked his way up through the various clinics—the Infirmary—then became professor of Ophthalmology at Rush. While there he developed this school which means so much to him. There are many men in Chicago and scattered throughout this section of the country who owe their ophthalmological training to Dr. Wilder and his teaching at Rush. He did a great deal for them. Rather than laying down academic methods of instruction, he believed in allowing a man to make his own observations, and if he had difficulty in deciphering his findings, was always ready to help in the analysis and diagnosis.

Dr. Wilder is eminently a clinician, and his keenest faculties have been devoted to clinical work and teaching. He is not a research man, for there are very few men who can combine

clinical ability with original laboratory investigation. It is far better for us that he did not go off at a tangent on research work, for then we would have missed the clinical knowledge he has been able to impart to us.

To us of this state, Dr. Wilder has always stood for the nicer things in ophthalmology and the finer things of life. He occupies a plane almost of his own. To a great extent one of the best influences came into being through his efforts, namely, the American Board of Ophthalmic Examinations, of which he has been secretary for many years. It endeavors to find out whether an individual is capable of being classed as an ophthalmologist —not necessarily a research man, not necessarily the last word in ophthalmogical knowledge—but the Board wishes to know whether or not this man is safe to turn loose upon the public as an ophthalmologist. Owing to his insistence upon high standards this Board has accomplished a great deal. It has shown the way in graduate teaching, so that the younger ophthalmologist becomes thoroughly familiar with the fundamentals of this subject as well as the clinical application of these fundamentals. The undergraduate teaching, the necessity of general medical knowledge before specializing, the general rounding out of ophthalmology in every respect, and the maintenance of a high ethical standard, are insisted upon by the Board, due largely to the standards set by Dr. Wilder in the beginning and upheld to this day. I think we should congratulate ourselves upon our association with a man of that character. To come under his influence and recognize what he stands for is a great privilege, and I feel keenly that he is not here in this little gathering held in his honor as Dean of Illinois ophthalmologists.

FIRE DEPARTMENT AS A MEDICAL AID

A fire engine came clanging down the street, followed by a hook and ladder company, and bringing up the rear an insurance patrol with tarpaulins in readiness.

The cavalcade came to a roaring stop before a hospital. The hose was fastened to the corner fire plug and the firemen with the end bearing the nozzle rushed into the lobby. They were confronted by the excited superintendent who exclaimed: "What does this mean, the hospital is not on fire!" "Fire nothing," replied the firemen, "we called here to give Kate Smith an enema."

CHICAGO MEDICAL SOCIETY DECLARES THE UNITED MEDICAL SERVICE AN UNETHICAL ORGANIZATION

At the regular monthly meeting of the Council of the Chicago Medical Society, February 14, 1933, the following resolution was unanimously adopted:

WHEREAS, Chapter Two (2), Section Four (4) of the Principles of Medical Ethics of the American Medical Association states, "Solicitation of patients by physicians as individuals, or collectively in groups, by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communication, is unprofessional," and

WHEREAS, on May 1, 1922, the Chicago Medical Society added a supplement to the Principles of Medical Ethics of the American Medical Association which states: Section One (1) "any individual, or any institution, private or public, or corporation, or association, or group of individuals under whatsoever name, which shall solicit patients by circulars or advertisements to the general public, shall be considered to act contrary to the best interest of the public and the profession and shall be deemed unworthy of the approval and support of the Chicago Medical Society," and

WHEREAS, Medical Policy No. 15 adopted by the Council of the Chicago Medical Society February 9, 1932—"Association with any institution or organization which advertises medical services to the general public, in any manner whatsoever, shall be deemed unethical," and

WHEREAS, the United Medical Service, Incorporated, is a corporation practicing medicine at 23 East Jackson Boulevard, in violation of Chapter Two (2), Section Four (4) of the Ethics of the American Medical Association as quoted above and of Section One (1) of the Supplement thereto adopted by the Council of Chicago Medical Society, May 1, 1922. and Medical Policy No. 15 adopted by the Council of the Chicago Medical Society, February 9, 1932,

Therefore, Be It Resolved, that the United Medical Service, Incorporated, is declared to be an unethical organization under the Rules of the American Medical Association and the Chicago Medical Society, and

Be It Further Resolved, that any member of the Chicago Medical Society giving aid to or supporting or abetting said United Medical Service, Incorporated, or receiving any emolument or compensation therefrom or rendering any service therein or thereto, is guilty of unethical conduct under Chapter One (1), Section Seven (7) of the By-Laws of the Chicago Medical Society.

CONGRATULATIONS TO THE ILLINOIS STATE MEDICAL SOCIETY

For several years the Illinois State Medical Society has conducted a successful program among its members to increase their interest and participation in public health and school health activities.

At its last annual meeting the section on Public Health and Hygiene presented papers as follows:

"A Plea for Systematic Health Education"
J. Howard Beard, M. D.

"The Value of Health Education as Seen by the Layman"
Mildred Durkee Lancaster

"The Effectiveness of Public Health Education From the General Physician's Point of View"
David J. Lewis, M. D.

"Health Education from the Viewpoint of the School Official"
Prof. J. B. McManus

"The Value of Public Health Instruction and Public Health Work as Seen by the Public Health Official"
B. K. Richardson,
Illinois Department of Public Health

This is a significant program. It is presented by the State Medical Society. It is representative of the essential participating agencies in a cooperative program for health promotion. It is indicative of proper team work between the medical and educational professions. It is sound. It sets a good example for other States to follow.

The School Physicians' Bulletin extends its hearty congratulations to the Illinois State Medical Society on its splendid work.

School Physicians' Bulletin
February, 1933

TOO MANY DOCTORS

The following resolution was passed by the Fulton County and Cobb County (Georgia) Medical Societies at their regular meetings a few weeks ago after the reading of a paper entitled "The Economic Status of the Medical Profession," which appeared later in the Journal of the American Medical Association, October 15, 1932, Page 1358, under the Department of Medical Economics.

RESOLUTION

Whereas, the medical profession of the United States is suffering losses all out of proportion to its ability to endure, and

Whereas, our losses are not so much due to the financial depression as to over production of doctors and decreased demand for paid medical service generally, and

Whereas, the production of doctors is far excess of the population increase,

Therefore, we the members of the_____ County Medical Society respectfully request the Medical Association of _____, the other State Medical Associations, the Southern Medical Association and the American Medical Association to adopt this or similar resolutions requesting the Medical Colleges of the United States to reduce the number of graduates each year until the law of supply and demand has been fully complied with. The number of graduates to be determined by a national committee appointed by the President of the American Medical Association.

Respectfully submitted,

_____ M. D., President,

_____ M. D., Secretary.

PREVENTION OF PROSTATISM

Joseph F. McCarthy, New York (*Journal A. M. A.*, Dec. 3, 1932), states that it is necessary to have an acute awareness of the advent of prostatism and to remedy the condition by some method such as the cautery punch operation, and thus to obviate the vicissitudes incidental to progressive enlargement of this gland, to enhance the economic usefulness of the patient and to insure serenity of mind to him and his family, when his mental capacity is at its peak and his physical resistance is approaching its inevitable decline. This, it seems to the author, is the problem of the immediate future, not of urologists, but of the medical profession in general, because it is they who first encounter such patients, and the success of this educational campaign depends on their perspicacity and capacity for cooperation.

THE SANE AND PROPHETIC LAY PRESS EAGERLY FIGHTS FOR THE MINORITY REPORT OF COMMITTEE ON COSTS OF MEDICAL CARE

The support that the lay press, that has sane perspective coupled with the gift of vision and near-prophecy, is lending to the minority report of the committee on costs of medical care is marvelously exampled in the Editorial "Political Medicine" published in the Ladies Home Journal for February, 1933.

So apt are its citations and parallels that the liberty is herewith taken for practically complete reproduction. Every sentence tells.

The editorial is written by Loring A. Schuler. We quote herewith:

POLITICAL MEDICINE

"The Journal has commented frequently and hopefully on the studies that have been made during the past five years by the Committee on the Costs of Medical Care. We believed that out of all the effort and expenditure involved there would surely come some solution of the twofold problem presented by the inability of a majority of people to pay present high costs for the cure of illness, and the collateral inability of doctors to earn incomes commensurate with the expense of their training.

"But the mountain has labored in vain; it has brought forth a mouse.

"As its major conclusions, the committee recommends, first, 'that medical service, both preventive and therapeutic, should be furnished largely by organized groups of physicians, dentists, nurses, pharmacists and other associated personnel . . . organized, preferably around a hospital, for rendering complete home, office and hospital care'; and, second, 'that the costs of medical care be placed on a group-payment basis, through the use of insurance, through the use of taxation, or through the use of both these methods.'

"In other words, state medicine.

"This is the report of the majority of the committee. It is combated by a vigorous minority, which quite rightly points out that 'there is nothing in experience to show that it is a workable scheme or that it would not contain evils of its own which would be worse than those it is supposed to alleviate. Above all there is no evidence to prove that it would accomplish what ought to be the first object of this committee, the lessening of the costs of medical care.'

"The medical profession has itself long stood in fear of the introduction of state medicine, with the building up of yet another bureaucracy to dictate its every action. The public has even greater reason to fear such a system. Already, according to the committee's statistics, taxation pays fourteen per cent of the nation's total bill for medical care—$514,500,000 out of $3,647,000,000. It is not difficult to conceive that a medical bureaucracy might rival the public-school system, or the Army and Navy, in its demands for tax funds.

"Health insurance should be voluntary, according to most of the members of the committee, though a minority is for the immediate introduction of compulsory insurance. For the benefit of those people who could not afford to pay for insurance, it is suggested that 'communities may well use tax funds,' and if the community cannot pay 'the committee recommends state financial aid.'

"And, perhaps in recompense for this tax-fund assistance, it is suggested that the hospital board to direct the general policies and assume responsibilities for the finances of the medical center might be 'elected by popular vote like school boards, or appointed by municipal or county officials.' Thus creating more political jobs, and quite likely in the end making the health of voters dependent upon regularity in support of the political boss.

"Meantime, what would become of those doctors who were not included in the medical-center staff? Some, of course, could continue to count upon the loyalty of patients who willingly or unwillingly would thus pay a double cost for medical care. But other physicians, forced outside the political pale, would surely find themselves dubbed as quacks, however reputable their practice might continue.

"The committee was supposed to find some way by which more adequate medical care might be made available to the public at lower cost, but nothing the majority has proposed even points the way. Far better the recommendations of the minority of the committee, who propose 'that government competition in the practice of medicine be discontinued and that its activities be restricted to the care of the indigent and of those patients with disease which can be cared for only in governmental institutions; to the promotion of public health,' and to the care of the Army, Navy and veterans having war-connected disabilities.

"And, of even greater importance, 'The minority recommends that united attempts be made to restore the general practitioner to the central place in medical practice.'

"'We are opposed,' says the minority report, 'to all forms of medical practice which make it difficult or impossible to maintain the personal relationship of physician and patient. Neither do we agree with the majority that savings in the cost of medical care are to be made by eliminating the general practitioner or submerging him in a group. . . . In a group the general practitioner tends to disappear. The great majority of illness and injuries (about 85 per cent) are of such nature that they can be treated efficiently by any able practitioner with very simple equipment.'

"It is the opinion of the JOURNAL that the accomplishments of this five-year study are to be measured by the minority report and not by the majority with its Utopian and impractical schemes; that the family doctor is the most-efficient and least-expensive source of general health; that state medicine, with its demand for compulsory insurance and increased taxation, is in every way to be avoided; that the mass production of health, through any medical hierarchy or bureaucracy, is impossible; and that the simple health-insur-

ance plan presented last month in the JOURNAL in Paul de Kruif's article, How Well Can We Live?, is so far the most practical of all methods to enable our people to pay for illness.

"We have politics messing its often-dirty hands in business, in our schools, in most public affairs and some private ones as well. But may we be preserved from politics in personal health."

Perhaps the two most widely read popular magazines in the entire country are those sister-publications, the *Ladies Home Journal* and the *Saturday Evening Post.*

The two are staunchly all-American. In fact the *Post* was founded in 1728 by Benjamin Franklin, peerless patriot.

Both the *Post* and the *Journal* are rigorously set to stay on the right side of the fence where questions of pure patriotism and anti-socialism are concerned. So to thinking men the country over there is satisfaction in the editorial standpoint of these periodicals as to the proposed changes in medical practice as set forth in the majority report of the committee on the costs of medical care. In addition to "Political Medicine," under date of Feb. 4, 1933, the *Saturday Evening Post* on its editorial page remarks it is neither necessary nor wise to develop socialistic medical systems in this country.

In part the editorial says again:

THE BURDEN OF MEDICAL COSTS

"In a normal year, the American people spend more than three and a half billion dollars on medical services, and the livelihood of a million individuals depends upon furnishing this aid. But the people do not complain of medical costs because of the total or average amount; the burden is due to the uneven, irregular and unpredictable expense of sudden or extreme illness. Many families go for long periods of time without spending more than trifling sums for these services, and then an operation or serious illness, together with hospitalization, nursing, dentistry, X rays and other items, falls upon them with catastrophic financial violence.

"For more than five years, a committee of physicians and laymen has been studying the subject, and in its recent and final report, or rather reports, there is the sharpest possible difference of opinion. The majority, consisting of nearly all the laymen and the larger number of physicians, recommends that medical service be furnished mainly by organized groups of physicians, dentists, nurses, pharmacists, and the like, preferably centering around a hospital, and rendering complete home, office and hospital care. It further recommends that the costs be met through some form of insurance. A considerable minority of the committee, consisting entirely of physicians, emphasizes the evils of health insurance in European countries, deplores the adoption of mass-production methods in medicine and declares that the majority's whole idea illustrates what is an obsession with many people—namely, that 'organization' can cure most, if not all, human ills.

"Persons who belong to the more fortunate income groups, from five or ten thousand dollars upward, are heedless in not providing savings-banks accounts or other reserves of their own against the contingency of expensive illness. Also there is point in the recommendation of the minority report that less of the burden of caring for illness among indigent classes be thrust upon the medical profession itself."

While this is a less meticulously prohibitive editorial than that in the *Ladies Home Journal* its import is the same.

As has been said often in these columns there are no Santa Clauses in adult life. For what he gets the citizen pays and pays. Wisely indeed does Mr. Schuler write.

"We have politics messing its often dirty hands in business in our schools, in most public affairs and in private ones as well. But may we be preserved from politics in personal health."

Ay, ay, Mr. Schuler!

THE ANNUAL MEETING

The Eighty Third Annual Meeting of the Illinois State Medical Society will be held in Peoria, on May 16, 17, 18, 1933, the Sessions to be held in the Pere Marquette Hotel. Arrangements are well under way to make this a highly interesting meeting that will appeal to every member of the Society.

The host Society, the Peoria Medical Society, through its Committee on Arrangements, is doing everything possible to make the 1933 Annual Meeting one long to be remembered.

Each of the five Scientific Sections through their officers, are arranging attractive programs, using only members of the Society to take part in the deliberations.

The meeting will begin on Tuesday morning, May 16th, with the Annual Secretaries' Conference, which will begin at 10:00 o'clock. The officers of the Conference are arranging an unusually interesting program that will appeal not only to the officers of the component societies, but to other members as well. It is hoped that the attendance at this conference will exceed that of former years.

The General Opening Meeting which has previously been held on Tuesday Evening, has been changed to 1:00 P. M. when the President will

officially call the meeting to order. This session will be very brief, and will be followed by the Oration in Medicine. All Sections will be in session that afternoon from 3:00 to 6:00. Tuesday Evening from 6:00 to 8:30, will be given over to the Veterans Dinner, for which the Committee is arranging an excellent program, the Fraternity, Alumni, and Section Dinners, as desired. At 8:30 that evening, the Peoria Society will be host at the Annual Stag, and this will be entirely different from the usual entertainment of former years.

All Sections will meet Wednesday morning from 8:30 to 11:00, and from 11:00 to 12:00 the Oration in Surgery will be given. The President's Address will be given at 1:30 P. M. Wednesday, to be followed by Section meetings.

Wednesday Evening is to be used to honor our President, Dr. John R. Neal. The President's Dinner will be held at 6:30, and there will be no speeches during or following the Dinner. The President's informal dance, or cards, as desired, will follow, and occupy the remainder of the Evening.

On Thursday Morning, the five Scientific Sections will join together for a meeting which will interest all members, regardless of their specialty in practice. Forty minutes is available for each Section to present interesting subjects, and there will be time for discussion of all papers. It is quite probable that two or three of the Sections will arrange a symposium taking up the various phases of some interesting group of conditions, complete details will be announced in the April Illinois Medical Journal.

The House of Delegates will have the first meeting at 3:00 P. M. Tuesday, to hear the annual reports of officers, councilors, committees, the presentation of resolutions, and other business which will be presented for action by the House.

The second meeting of the House of Delegates will be held at 8:30 Thursday morning.

Immediately following the closing session of the House of Delegates the President-Elect, Philip H. Kreuscher, will be inducted into office of President, by the retiring President.

All exhibits, both commercial and scientific, will be shown in the Pere Marquette Hotel, and arrangements are under way to have an excellent display which will be of interest to everyone at the meeting. Peoria is centrally located, and can be reached easily from all parts of the State by railroad, or automobile, and the attendance at this meeting should be in keeping with that of the meetings of recent years. The preliminary announcement of the program will be given in the April Illinois Medical Journal and the official program with all details of the meeting will appear in the May number. Now is the time to begin to think of the Annual Meeting, the Members' own meeting, and the attendance this year will be a record breaker, as it should be.

Every component Society in Illinois is entitled to representation in the House of Delegates, and should elect delegates who attend meetings, so that they will have a voice in the transactions of that important Body, which is the real legislative branch of the Illinois State Medical Society.

The Peoria hotels are cooperating with the Committee on Arrangements and all reservations will go through their Committee. It is always advisable to make hotel reservations as early as possible, as the hotels will be taxed to their capacity during the meeting. Those wishing information as to hotel accommodations, or desire to make their reservation at this time, may do so by writing to Dr. W. A. Malcolm, Chairman, Hotel Committee, Peoria, Illinois, and the matter will receive prompt attention.

Plan now to meet your friends in Peoria, and do not forget that a suitable program of entertainment is under way for the ladies, and the Woman's Auxiliary will have their usual interesting program arranged for their members and guests.

END-RESULTS IN FRACTURES OF CALCANEUS

Rudolph S. Reich, Cleveland (*Journal A. M. A.*, Dec. 3, 1932), reports the results of surgical intervention for correction of pain and disability in eighteen patients with fractures of the calcaneus, nine recent and nine of long standing. Operative correction was performed immediately on the nine patients with recent fractures, and fusion operations were subsequently performed on all except two patients treated by the Böhler method. Arthrodesis in the old cases gives a uniformly excellent result and materially shortens the period of disability. In the recent fractures, anatomic correction fails to solve completely the problem of disability. For these an arthrodesis is, therefore, recommended as soon as possible after anatomic correction.

COMMITTEE ON ARRANGEMENTS FOR 1933 ANNUAL MEETING

Committee on Arrangements: C. G. Farnum, General Chairman; H. A. Vonachen, Vice-General Chairman; C. W. Magaret, Secretary-Treasurer.

Officers of the Peoria City Medical Society: J. R. Vonachen, Past President; Hugh E. Cooper, President; A. P. Kannapel, First-Vice President; Geo. Parker, Second-Vice President; C. W. Magaret, Secretary-Treasurer.

Reception Committee: Allan Foster, Chairman; Vice-Chairmen: C. U. Collins, Arthur Sprenger, Geo. Parker, Wm. Cooley, Orville Barbour, C. S. Turner and S. H. Easton. Members: Geo. Zellar, O. B. Will, C. H. Brobst, H. G. Eichhorn, J. C. Roberts, O. J. Roskoten, J. P. McMahan, W. T. Marrs, H. M. Sedgwick, E. E. Royce and L. E. Monroe.

Entertainment Committee: W. A. Hinckle, Chairman; Baxter Brown, Vice-Chairman; E. Z. Levitin, A. L. Corcoran, F. G. Hopkins, Bernard Heymann and G. C. Lewis.

Registration and Information: W. B. Eicher, Chairman; Vice-Chairmen: J. F. Sloan and Walter Wyatt. Members: C. G. Blake, H. L. Williams, L. V. Boynton, F. L. Stiers, F. Haas, P. F. James and R. L. Eddington.

Committee on President's Dinner: B. S. Adelsberger, Chairman; H. M. Wilson, Vice-Chairman; J. E. McCorvie, R. L. Green, G. W. Washburn, F. S. Davis and T. S. Egan.

Publicity Committee: Leslie Rutherford, Chairman; R. A. Hanna, Vice-Chairman; Wm. Major, E. E. Barbour and Geo. Michell.

Meeting Place Committees: Surgery: S. M. Miller, Chairman; J. E. Bellas, Vice-Chairman; F. G. Morrill, Wm. Roche and J. H. Bacon.

Medicine: Harry Durkin, Chairman; J. W. Sours, Vice-Chairman; W. W. Cutter, A. A. Knapp, Clarence Fischer, T. C. Coggshall and A. J. Foerter.

Eye, Ear, Nose and Thoat Section: Wright C. Williams, Chairman; C. D. Brobst, Vice-Chairman; C. D. Sneller, C. D. Thomas and E. H. Bradley.

Public Health and Hygiene: E. S. Gillespie, Chairman; Wilbur Weinkauff, Vice-Chairman; R. C. Bradley, E. L. Davis and A. B. Barker.

Radiology: P. B. Goodwin, Chairman; H. B. Magee, Vice-Chairman; P. T. Spurck.

Industrial Surgery: S. H. Easton, Chairman; J. E. Meloy, Vice-Chairman; E. C. Burhans, L. C. Ives, G. L. Cohen and H. L. Yoder.

Transportation Committee: C. V. Ward, Chairman; C. P. Strause, Vice-Chairman; J. R. Bierly, W. H. Holbrock, G. R. Seward, B. H. Trewyn, W. L. Bowen and A. J. Blickenstaff.

Exhibits Committee—Commercial: H. L. Pintler, Chairman; M. T. Easton, Vice-Chairman; Sandor Horwitz, C. E. Scullin, S. A. Smith and D. D. Kirby.

Scientific: M. P. Bohrod, Chairman; F. H. Decker, Vice-Chairman; M. Pollok, F. M. Meixner, A. H. Cohen and J. M. McCuskey.

Ladies Entertainment Committee—From the Society: Margaret B. Meloy, Chairman; Ethel Cooper, Vice-Chairman; Esther H. Stone, Helen C. Coyle and Lucia H. Lucy.

From the Ladies: Mrs. J. R. Vonachen, Chairman; Mrs. W. C. Williams, Vice-Chairman; Mrs. H. E. Cooper, Vice-Chairman; Mrs. Arthur Sprenger, Mrs. W. A. Malcolm, Mrs. C. G. Farnum, Mrs. R. L. Green, Mrs. H. A. Vonachan, Mrs. C. D. Sneller, Mrs. R. A. Hanna, Mrs. C. E. Sibilsky, Mrs. C. U. Collins, Mrs. Allan Foster, Mrs. Geo. Michell, Mrs. J. E. McCorvie, Mrs. C. W. Magaret, Mrs. J. F. Duane, Mrs. F. G. Morrill, Mrs. H. A. Durkin, Mrs. C. S. Turner, Mrs. Clarence Fischer, Mrs. S. M. Miller, Mrs. W. L. Bowen, Miss Mary Knapp, Mrs. George Parker, Mrs. B. S. Adelsberger and Mrs. M. T. Easton.

Alumni and Fraternity Reunion Committee: R. M. Sutton, Chairman; J. A. Eastman, Vice-Chairman; L. A. Burhans, J. T. Weed, W. A. Borin and A. G. Ekonomou.

Golf Committee: J. T. Jenkins, Chairman; J. F. Duane, Vice-Chairman; L. M. Coffey and H. F. Diller.

Ladies Golf Committee: Mrs. W. W. Cutter, Chairman; Mrs. J. A. Bellas, Vice-Chairman and Mrs. H. M. Wilson.

Veterans Service Advisory Committee: E. A. Garrett, Chairman; E. E. Nystrom, Vice-Chair-

man; G. H. Stacy, A. E. Hubbard and T. W. Floyd.

Special Entertainment Committee: W. A. Michael, Chairman; E. P. Burt, Vice-Chairman; R. W. King, F. A. Causey, P. A. Cusack, A. D. Phillips, Elmer Seaburg, F. E. Hammitt, and C. E. Sibilsky.

Hotel Committee: W. A. Malcolm, Chairman; E. C. Kelly, Vice-Chairman; Wm. Blender, A. S. Plummer, F. H. Maurer, J. B. Jennings, W. A. Gott, K. N. Petri, P. R. McGrath, Geo. Borin, P. F. Jones, Thos. R. Plumer, Jos. Sparks and Jerry S. Bell.

DOCTORS DESIRING TO PRESENT PAPERS BEFORE THE 1933 MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY TAKE NOTICE

SECTION ON PUBLIC HEALTH AND HYGIENE

All physicians desiring to prepare and read papers before the section on public health and hygiene of the Illinois State Medical Society to be held in Peoria in May should communicate with the chairman of the section John W. H. Pollard, Evanston, or the secretary, J. Howard Beard, Urbana.

SECTION ON RADIOLOGY

Doctors wishing to present papers before this section kindly communicate with the chairman, P. B. Goodwin, Peoria, or the secretary, Robert A. Arens, 2839 Ellis Ave., Chicago.

SECTION ON MEDICINE

Doctors wishing to present papers before the section on medicine communicate with the chairman, Walter H. Nadler, 8 So. Michigan Blvd., Chicago, or the secretary, R. F. Herndon, Springfield.

SECTION ON SURGERY

Doctors wishing to present papers before the surgical section will please apply to the chairman, Sumner Miller, Peoria, or the secretary, George W. Post, 4010 W. Madison St., Chicago.

SECTION ON EYE, EAR, NOSE & THROAT

Doctors wishing to present papers before the Eye, Ear, Nose & Throat section kindly communicate immediately with the chairman, Frank Novak, Jr., 30 No. Michigan Blvd., Chicago, or the secretary, G. S. Duntley, Macomb.

SECRETARY'S CONFERENCE

Any member wishing to present a paper at the secretary's conference communicate immediately with the President, T. D. Doan, Palmyra, or the secretary, Elizabeth R. Miner, Macomb.

EXHIBITS AT THE ANNUAL MEETING

The Illinois State Medical Society has never before had better facilities available for both commercial and scientific exhibits, than are available for the 1933 Annual Meeting. They will be shown on the lobby floor of the Pere Marquette Hotel, Peoria, but will be separated from the general lobby, so there will be no interference whatever.

All ethical prospective exhibitors who have not received the diagram and application for exhibit space, may receive same by addressing the Secretary of the Society.

We expect to have many interesting scientific exhibits at the meeting, and members of the Society who would like to prepare an interesting scientific exhibit, should also address the Secretary at an early date, telling the nature of the exhibit, and the amount of space desired for same.

Ethical hospitals desiring to prepare interesting exhibits, may also make such application, if they desire to have an exhibit at the meeting. Several interesting hospital exhibits appeared at the 1932 Annual Meeting, and these were very popular with the many visitors present. Complete information concerning exhibits may be procured promptly by writing Dr. Harold M. Camp, Secretary, Monmouth, Illinois, and all requests for space will be submitted to the special Council Advisory Committee, for action.

SIXTY-SECOND ANNUAL MEETING AMERICAN PUBLIC HEALTH ASSOCIATION

The American Public Health Association, foremost sanitary organization in the United States, announces its Sixty-second Annual Meeting, to be held in Indianapolis, Indiana, October 9-12, 1933.

It was in Indianapolis in 1900 at the Twenty-ninth convention of the American Public Health Association that Dr. Walter Reed read a paper entitled "The Etiology of Yellow Fever—A Preliminary Note" indicating that the mosquito serves as the intermediate host for the parasite of yellow fever. History was being made in the Old German House that day, yet it is reported by some of those present that the epochal report was received with only mild interest.

At the Sixty-second Annual Meeting it is planned to honor the only living participant in the famous Yellow Fever Experiment, Dr. John R. Kissinger, at a special memorial session.

The scientific program will discuss every aspect of modern public health practice, from the viewpoint of the health officer, the laboratory worker, the epidemiologist, the child hygienist, the industrial hygienist, the nurse, the vital statistician, the health educator, the food and nutrition expert, the sanitary engineer. Distinguished scientific pronouncements may be expected from the outstanding personalities in the public health profession who will contribute to the program.

The American Public Health Association, 450 Seventh Avenue, New York City, will be glad to send more complete information about its Indianapolis Annual Meeting, to anyone interested.

FOURTH CONGRESS OF THE PAN AMERICAN MEDICAL ASSOCIATION

The fourth congress of the Pan American Medical Association will be held in Dallas, Texas, March 21-25, 1933. There will be a large list of contributors to the scientific program and altogether there will be about two hundred papers from distinguished medical men. The total number of physicians participating in the program will be approximately six hundred.

For detailed information communicate with the president, Dr. John O. McReynolds, Mercantile Bldg., Dallas, Texas.

DELAY IN OPERATING FOR CANCER: LORD MOYNIHAN'S VIEWS

The A.M.A. London letter, December 17, 1932, quotes their regular London correspondent as follows:

Speaking at a hospital meeting in Manchester, Lord Moynihan said that cancer was the only one of the six great killing diseases in this country that showed any increase in the last twenty years. While the average death rate from all causes had gone down 32 per cent the cancer death rate had increased 20 per cent, and in the last seventy years more than fivefold. One death in every seven of persons over 35 years of age was due to cancer, yet cancer in its early stages was completely curable. The Ministry of Health statistics showed that 71.4 per cent of persons who had been treated for grade 1 cancer of the breast were alive and well without any evidence of disease ten years after operation, and if deaths from other causes among these cases were excluded, the survivors ten years after operation were 87.5 per cent. Why were equally good results not always obtainable, and on whom should the blame be laid? The medical profession must take a share of it. Too many physicians were still skeptical about the good results from surgical treatment, and in too many cases delayed advising operation and allowed the patient to drift into the condition which made recurrence after operation inevitable. "Wait and see" was wrong; the advice should be "Go and look," and at once. The public was also to blame for the great increase in the severity of cancer because of incredulity as to the results of operations. Patients who had been cured refused to advertise their cures, because of a false notion that cancer was a sort of moral blemish. The public ought to know that in operating the surgeon had gone as far as it was physically possible for him to go. His operations could not be more extensive; it was hardly possible for them to be safer or to have more successful end-results. The reason why equal success did not attend every case was that nearly everything depended on early treatment. Cancer was always primarily a local disease. If it was accessible when local, it was definitely curable. Certain cases were still inaccessible, but even cancer that could not be removed from the brain was now accessible to radium treatment.

Cancer rarely attacked a healthy organ. Such things as chronic irritation, inflammations, lumps and sores on the tongue and lip were not cancerous to begin with but they led to cancer. Cancer was not hereditary, infectious or contagious. Its worst feature was that at first it was almost always painless. He wished it were painful so that people would be driven to the physician. The accessible cancer was curable on one day but not on the next. Hence the overwhelming importance of early diagnosis.

EDUCATIONAL COMMITTEE ILLINOIS STATE MEDICAL SOCIETY

Report for February, 1933

RADIO

47—Radio talks given from WGN, WJJD, WAAF, including 24 talks during the Young Mother's Hour given every morning.

Lowell S. Selling—Reducing Children's Nuisance Values.

Bengt Hamilton—Protecting Infants from Tuberculosis.

Philip Aries—My Child Won't Eat.

Noel G. Shaw—Intestinal Infections of Childhood.

Norris J. Heckel—Kidney Stone.

Howard W. Champlin—The Postnatal Period.

Charles J. Drueck—Diet and Disease.

S. J. Harbrecht—Indigestion.

L. T. Curry—What is a Mastoid.

William E. Cary—Botulism.

William H. Rose—Pneumonia.

Frank V. Theis—Varicose Veins.

George L. Perusse—The Feet and Their Ailments.

W. G. Epstein—Acute Abdominal Pain.

M. H. Streicher—Colitis.

W. J. Yonker—The Functions of the Nose.

Henry A. Greenebaum—Grippe.

F. W. Slobe—The Treatment of Common Emergencies.

A. M. Stober—Germs and Disease.

A. I. Edison—Unconsciousness.

Louis N. Katz—The Importance of Heart Disease as a Public Health Problem.

Arkell Meyers Vaughn—Nervousness and Thyroid Disease.

Edmund Jacobson—The Nervous Patient.

SPEAKERS' BUREAU

40—Health programs were arranged for lay groups as follows:

9—Parent Teacher Associations.

18—Women's Clubs.

4—Business and Professional Groups.

1—Men's Club.

7—Public Community meetings.

1—Farmers Institute.

SCIENTIFIC PROGRAMS
for County Medical Societies:

10—Programs scheduled for medical groups:

Will-Grundy—Edward K. Stieglitz—"Classification of Nephritis in Pregnancy."

Will-Grundy—Philip Kreuscher.

Will-Grundy—Harold O. Jones—"Treatment of Pelvic Infections" and film, "Salpingectomy and High Fundic Amputation for Residues of Tubal Disease."

Peoria City—Arno B. Luckhardt—"Recent Advances in Endocrinology."

Scott County, Davenport, Iowa—James J. Callahan—"Fractures."

Iroquois County—Lena K. Sadler.

Rock Island—Julius H. Hess—"Pediatrics."

Livingston County—William H. Holmes—"Etiology and Treatment of Various Types of Secondary Anemia."

Livingston County—James G. Carr—"Etiology and Treatment of Pernicious Anemia."

Monroe County—D. D. Monroe—"Heart Disease."

PRESS SERVICE

727—Releases during the month:

359—Regular press service.

27—Monthly service.

33—Home Bureau Advisors, Material on Colds.

89—Newspapers, re meeting DeWitt County Medical Society.

67—Newspapers, re meeting LaSalle County Medical Society.

87—Newspapers, re meeting Livingston County Medical Society.

31—Newspapers, re meeting Perry County Medical Society.

32—Community papers, re meetings Branches of Chicago Medical Society.

2—Chicago Association of Commerce, re meetings Chicago Medical Society.

12—Educational articles written and approved by the Committee:

Personal Hygiene.
The Backward Child.
Care of the Skin.
Causes of Arthritis.
Colitis.
Food Poisoning.
False Ideas About Syphilis.
The Common Cold in Children.
Predisposing Factors in Diabetes.
Acute Abdominal Pain.
Habit Formation.
A Story with A Moral.

SERVICE TO COUNTY MEDICAL SOCIETIES AND MISCELLANEOUS:

In addition to the newspaper announcements of County Medical Society meetings, the office of the Committee gave the following service:

129—Postal cards sent to physicians inviting them to attend a meeting of Perry County Medical Society.

241—Notices of Livingston County Medical meeting released to physicians.

151—Postal card announcements of Franklin County meeting sent to physicians.

350—Postal card announcements mimeographed for the Women's Auxiliary to the Chicago Medical Society.

Material From the Package Library sent to a doctor of Ottumwa, Iowa.

25—Package Libraries sent to Illinois physicians, subjects:

Fair, Fat and Forty.
White House Conference.
Health and Depression.
Diphtheria.
Mental Hygiene.
Mental Hygiene in Children.
Venereal Diseases.
Health of the School Child.
Growing Old Gracefully.
Health of the Middle Aged Woman.
Tuberculosis.
Children and the Movies.
The Nervous Child.

Help given to Johnson County in outlining plans for a Crippled Childrens' Clinic.

Material on clinics for the handicapped secured for physicians of Livingston County.

Outlines mimeographed for Public Health Chairman of the Illinois Federation of Women's Clubs.

Report of Chicago activities of the Educational Committee prepared for Health Department to submit to Inter-City Chamber of Commerce contest.

Requests for copies of radio talks received from listeners in Wisconsin, Iowa, Michigan, Indiana, Illinois and Kentucky.

Interview with Child Hygiene Chairman of the Illinois Congress of Parents and Teachers concerning cooperation with health program at the Annual Meeting of the Congress.

224 Notices sent to women physicians practicing outside of Chicago. Giving assistance to a committee of women physicians appointed to plan for a special half day session at the Annual Meeting of the State Society.

List of officers of County medical societies furnished Nurses Association.

Suggestions given to nurse promoting public health meeting at Mendota.

Contact made with the Boy Scouts—hope to develop some health work with this organization before summer.

Respectfully submitted,

JEAN MCARTHUR
Secretary.

AUXILIARY NEWS

Livingston County: Mrs. D. W. Tripodi of the Livingston County Sanatorium, entertained the wives of members of the Livingston County Medical Society, at luncheon February 15th. Mrs. E. W. Mueller of Chicago, the State Auxiliary President, honored guest and speaker talked on "The Aims, Purposes and History of the Woman's Auxiliary to Medical Societies of the County, State and Nation." Mrs. Ernest G. Beatty, President, presided over business meeting following musical program. Mrs. A. B. Middleton, Councilor of 2nd District, was another honored guest.

Rock Island County: Since the first of the year meetings of this County Auxiliary have been held in the Hospitals, instead of hotels as formerly, with very gratifying results. Attendance has increased and enthusiasum stimulated. Mrs. W. D. Chapman of Silvis deserves great credit for her efforts in auxiliary work in this County.

At the February meeting this auxiliary voted to send the magazine "HYGEIA" to all nurses training schools in the country; endorsed House Bill 161; Mrs. W. D. Snively of Rock Island gave a summary of the Majority Report of recent investigation made to determine the cost of medical care, and Mrs. W. D. Chapman summarized the Minority Report on the same subject.

It has been the custom for several years to print in pamphlet form Reports of the Annual Meetings of the Woman's Auxiliary to the Illinois State Medical Society. Owing to the necessity of keeping expenses down this year the Auxiliary Board decided not to have these reports printed but to publish them in the space allotted to the Auxiliary in the State Medical Journal. A Special Committee was appointed by the President to take charge of this work:—Mrs. F. P. Hammond, Mrs. J. H. Hutton and Mrs. J. P. Simonds.

It is therefore through the courtesy and consideration of Dr. C. J. Whalen, Editor of the JOURNAL, that it is possible to bring these Annual Reports to all members of the auxiliary throughout the State. These reports will appear in these columns for the next few issues. Valuable and interesting information and outline of the work of last year's Board will be found in these reports. Mrs. E. W. Mueller, President of the State Auxiliary urges each auxiliary member to read these reports carefully and preserve them for future reference.

Reports of the President, Treasurer, and Corresponding Secretary submitted at the Annual Meeting in Springfield last May follow;—

Mrs. F. P. Hammond, Chairman
Press & Publicity Committee.

PRESIDENT'S REPORT

Early in June of 1931 your president wrote to the President of the Illinois Medical Society asking him to name the Advisory Council for 1931. Dr. R. R. Ferguson replied stating there would be no change and the committee of previous year—Dr. J. H. Hutton, Dr. W. D. Chapman, Dr. C. J. Whalen could continue as Advisory Council.

The first Board Meeting was held in Chicago, June 26, 1931, at which time Chairman of Committees were elected, as follows:—

Organization.....Mrs. W. D. Chapman, Silvis
Legislation.....Mrs. Solomon Jones, Danville
Press and Publicity..Mrs. F. P. Hammond, Chicago
Printing.....Mrs. R. K. Packard, Chicago
Social.....Mrs. H. B. Henkel, Springfield
Program.....Mrs. N. C. Iknayan, Charleston
Revisions.....Mrs. Harold Miller, Chicago
Public Relations...Mrs. G. Henry Mundt, Chicago
Registration.....Mrs. Lucius Cole, River Forest
Credentials.....Mrs. A. H. Baugher

The President of the State Medical Society and Secretary of the Educational Committee advised that the Illinois Medical Society had endorsed "Hygeia," and the Board decided to ask the County Auxiliaries to take up promotion of "Hygeia." A special committee was named for Hygeia, with Mrs. G. E. Johnson, Chicago, as Chairman.

The Publicity Chairman was requested to collect clippings on matters of interest to the Auxiliary, to be made into a scrapbook for future reference. This scrap book was part of an exhibit at the National Convention in New Orleans.

A letter was sent to Dr. Andy Hall, Commissioner of Public Health for State of Illinois, assuring him of our support in his work for compulsory vaccination, and offering to assist him in any way possible. Dr. Hall replied stating he appreciated our offer of co-operation.

Plans for study programs were discussed and it was decided to continue with programs suggested by the Educational Committee of the Illinois State Medical Society for the previous year. The following subjects were made basis for programs for this year:

Contagious Disease Control and Emphasis on Smallpox.

Legislation—Medical Practice Act, Bills, etc.

Survey of Magazines with regard to their presentation of Medical Practices, costs, etc.

A Thorough Study of the Magazine "Hygeia."

List of Books written by Doctors or about Doctors with review of several.

Some Economic Aspects of the Practice of Medicine.

Child Welfare and the Examination of School Children.

County Presidents were invited to attend the second Board Meeting held in Chicago November 17th. Tour planned to inspect the A.M.A. headquarters and publishing plant in Chicago, following meeting.

Two other Board Meetings were held in Chicago, January 26th and March 15. Average attendance at Board meeting was fifteen.

Delegates and Alternates to the National Convention in New Orleans were elected at the March 15th Board Meeting.

At the request of the President-Elect, a special committee on Finance was named. Chairman, Mrs. E. W. Mueller, Mrs. A. H. Brumback, Mrs. R. K. Packard, Mrs. S. E. Allen and Mrs. Lucius Cole. This was an addition to our Committees, the Finance Committee being one recommended by the National Auxiliary.

In April your president appointed a special com-

mittee to study the question of some philanthropic project, reporting their recommendations at the Annual Convention. Members of this committee—Mrs. J. H. Hutton, Chairman; Mrs. E. W. Mueller and Mrs. R. K. Packard.

Having very much at heart the line of study to be followed this year your president worked with Mrs. N. C. Iknayan, Program Chairman, in preparing the programs, and the expense of this work was included in my accounts.

In addition your president sent out 790 pieces of mail, including copies of State and National constitutions, program materials and leaflets.

A letter was sent to each County Auxiliary asking all their members to write letters to all members of Congress protesting against the passage of the Maternity Act Bill.

In April a letter was addressed to County Presidents calling attention to an article in a popular magazine, and the comment on this article which appeared in the April Illinois Medical Journal. Presidents were asked to bring this before their auxiliary members requesting each one to pledge herself to interest three lay friends to write letters of protest to this magazine.

During the year your president visited many auxiliaries throughout the State addressing various groups interested in organizing auxiliaries. Two important groups were from Olney and Lincoln.

Your president attended the National Convention in New Orleans submitting report on the work of the Illinois Auxiliary. The salient points mentioned in this report are:

Illinois has an Advisory Council of 4 appointed by State Medical Society.

All County Auxiliaries have Advisory Councils appointed by County Med. Soc. Illinois has 11 organized counties. Cook County having five branches.

One new county organized this year with 57 members.

Our Councilors are members of Organization Committee.

We use "Direct Method" in organization.

Illinois has all committees of National Auxiliary—Archives and Finance Committees being added this year.

State Medical Society through its Educational Committee suggests line of study to the Auxiliary.

Board members 24. Four Board Meetings during this year. Average attendance 14.

I express grateful appreciation to Dr. Hutton of our Advisory Council whose help and encouragement made some of our work possible. Our thanks are also expressed to Miss J. McArthur for her material help with typing and mimeographing programs.

I wish at this time to thank all the members of the Board who gave such cheerful and wholehearted cooperation, all County Presidents and their officers who responded promptly and carefully to requests for information and the officers and chairmen of the Sangamon County Auxiliary who took charge of the arrangements, which have made this Convention such an outstanding success.

Mrs. T. O. Freeman.

TREASURER'S REPORT

Cash, Receipts and Disbursements
May 1, 1931 to May 1, 1932

Cash balance carried forward 1930-1931	$532.36	
Cash received from dues	540.00	
		$1,072.36
Disbursements		572.79
Balance on deposit First National Bank of Chicago, Ill.		$ 499.57

Accounts audited and found true and correct by Ella B. Burlingame, Public Accountant, Chicago, Ill., May 1, 1932.

Mrs. A. H. Brumback.

N. B. Space does not permit itemized report. Detailed figures can be secured upon request.

CORRESPONDING SECRETARY'S REPORT

As your corresponding secretary I wish to submit the following report.

When asked to serve I felt that it would be a pleasant task in spite of the many duties incident to the office.

The Woman's Auxiliary to the Illinois State Medical Society is no longer an experiment, but a proven factor for good. It was first organized in Illinois in 1927 with only a few interested women. It has made a healthy growth in a short time.

Up to date we have eleven active organized counties, with 555 paid members.

Wills Grundy County	25 members
St. Claire County	57 members
McLean County	13 members
Randolph County	15 members
Cook County	298 members
Vermilion County	52 members
Kane County	21 members
Rock Island County	18 members
Douglas County	10 members
Coles Cumberland County	12 members
Sangamon County	35 members

At the June meeting of the Board it was decided to request the County Auxiliary Presidents to read and discuss the magazine Hygeia, and to place it in every physician's office, library, school and home. In accordance with this request many copies were secured and sent to all Presidents of County Auxiliaries.

Copies of the minutes, and report of the annual meeting of the Woman's Auxiliary to the American Medical Association, at Philadelphia in June were received and mailed to all Board members and County Presidents.

Notices of Board meetings were mailed to all Board members for June, November, January and March.

On February 19, 1932 a communication was sent to our Representative Charles Adkins, Washington, D. C. asking him to use his influence in defeating the Shepard Towner Bill.

On March 25, 1932 in compliance with the action of the Board 38 letters were mailed to all members of the Board, and County Presidents requesting them to write an outline plan of procedure of their auxiliary work during this club year, which met with gratifying results.

I want to thank all of those with whom it has been my privilege to come in contact for their courteous letters, friendly greetings and never failing cooperation during my year's work. I appreciate the privilege of serving.

Mrs. E. C. Allen.

Correspondence

DR. VAN DERSLICE—A TRIBUTE

Oak Park, Ill., January 10, 1933

To the Editor:

James Warren Van Derslice was a man loved by his close associates. He was a man, through and through. And during an acquaintanceship of over thirty years I never once found him lacking in the fundamentals of high manliness —a great record that for anyone.

Organized medicine, about twenty-five years ago, suffered a rift within itself. One faction was called "highbrow"; the other "lowbrow." And because of the partisanship he showed at that time Dr. Van Derslice was ever after called a "lowbrow."

For the younger generation present I should explain that in the days when this rift occurred organized medicine was not the fine and democratic body that it is today. Rather was it a cabal—a great society ruled by the iron hand of the select few who stood omnipotent, who dictated policies, standards and pursuits. You were ostracized if you deviated from the rules and regulations laid down by this group of autocrats.

From this mighty Mussolini method there developed the "lowbrow" group with "Van" one of its first agitators. The "lowbrows" had their beginnings in the Chicago Medical Society, and later invaded the national organization. Besides Dr. Van Derslice at the outset, and Doctors Nagel, Fowler, Ferguson and Kraft I might mention plenty of others in this brave handful.

They were all of them beaten and knocked down, time and time again. But they always got up. And finally they stayed up, not to be knocked down again. They routed the highbrows completely. Ever since the lowbrows have been in the saddle, but if it had not been for Dr. Van Derslice and his co-workers would that element have ever made so much as a stirrup to the unending harm of medicine?

Year after year I attended conventions with "Van." What I state of his fighting faculties is intimate knowledge, and not hearsay. Fighting for a principle that he felt was right, I have known Van to sit in a caucus all night long. And those experiences I count among the rarest joys of my life.

When we take inventory of what life has given us or denied, of what we have possessed or of what has passed us by, even more than temporary fame or monetary success the thing that in reminiscence seems to have brought us greatest delight is the contact and the friendships with men like James Warren Van Derslice.

His enduring friendships were counted by the thousands. Among his intimates were men of both national and international repute. There were men like Cotton, Billings, Pusey, Cary and Dean Lewis, Mattas of New Orleans, Simmons of San Francisco, Brewer of New York, Martin of Philadelphia, Crile of Cleveland, Moynihan of Leeds and Lane of London, to whom he was always just "Van." Few have had the rare privilege of enjoying the friendship of such men. It is a fine thing to have done so.

Upon many of our own closeknit group he has made an endearing and enduring and potent impression. Not only my humble self will bear witness to this but many others including Dr. Anna E. Blount and hundreds of women physicians as well as Oscar Hawkinson, Frank Needham, Kerr and Scott.

Even though he differed perhaps from them in policy, idea or method, yet deep in his heart and soul he had the utmost respect for their individual opinions, as I have often heard him admit.

With a keen sense of justice and passion for fair dealing, he was either for you or against you. No one ever knew him to be guilty of a small or dirty trick, even to an arch enemy. Nor was there ever any question as to where Dr. Van Derslice stood. He took defeat as philosophically as he did victory, and held no malice afterwards. But you never caught him straddling a fence, with muscles tensed to jump on the winning side. Not Van! Those who knew him best, loved him most. He was a wonderful chap.

His leadership in the Aux Plaines society must be referred to. Ever since the component society decided to have branches, Dr. Van Derslice had represented us in the council. Most of the time his advice was right. Which is as

much as can be said for any man since none of us is ever 100% perfect. You couldn't expect Van to be the exception. To the young men of the Aux Plaines who are to carry on as we of the old guard drop out from time to time, "Van" has left a priceless heritage. He was for the group first, for himself afterwards.

In the Aux Plaines branch of the Oak Park Physicians club for the past ten years nothing was ever taken up, nor any decisions made, unless "Van" had a finger in the pie. I feel sure that I can say without fear of contradiction that "Van" did a pretty good job. Never was there a member of whom I know anything who was more beloved, or who will be as much missed as James Warren Van Derslice, and this as much as anything else because he possessed the rare quality of dependability. Though we are all touched by "Van's" going yet there is a sunny side to this going while you are yet comparatively young and still in the hey-day of success.

I remember that when I was an undergraduate the venerable Dr. Oscar King in an address to the class remarked "Have an ideal; chart your course, and steer for it. Even if you never reach the goal, you will be all the better men for the trying." That very day I set Dr. Wm. E. Quine as my goal. I have never reached his medical eminence, but I have never ceased trying to emulate in other ways the great and good physician that he was, and I sincerely believe that by his ideals and his integrity that he moulded the character of more medical students than has any other medical man within my knowledge. And Van was like that. I believe that during the last five years Van's leadership of the Aux Plaines society attained a higher pinnacle of success than has ever been reached by any other leader in any other branch of the Chicago Medical Society. I know I speak the sentiments of many physicians when I say that "Van's" life, his works and his part in the medical activities of his colleagues especially in Oak Park has left on our hearts an indelible imprint.

HARRY JOHN STEWART.

He: "There are a thousand reasons why I love you."
She: "My goodness!"
He: "That's one of them."

THE LENS ANTIGEN TREATMENT OF CATARACT

To The Editor: Noting the abstract of an article by Dr. A. E. Davis on The Lens Antigen Treatment of Cataract in the January number of your Journal, it seemed to me that your readers should know how the profession have reacted to Dr. Davis' report. In the first place we all know that many lens opacities remain stationary throughout life. Early senile cataract may remain stationary for many years, and changes of refraction during this time may improve vision considerably.

Ellis (Arch. of Oph. 1928:57 p. 46) reported a series of cases treated by lens antigen compared with the same number of untreated cases and found an equal number in both series which remained stationary. No clearing of opacities was observed in either series. This is what one would expect since there are no theoretical reasons why immunization to lens antigen would cause absorption of only the opaque portions of the lens, leaving the clear lens intact, and Dr. Davis has never claimed to produce absorption of the whole lens.

So far as we can make out, injections of lens antigen simply act as foreign proteins injections, the reaction from which may occasionally be severe, but is incapable of affecting cataract. They affect principally the mental attitude of the suggestible patient and since the course of injections are long and expensive, your correspondent and a number of prominent ophthalmologists with whom he has discussed this subject feel that the method should not be recommended.

SANFORD GIFFORD, M.D.

PARENTAGE OR GENES OR ENVIRONMENT

Kansas City, Mo.

To The Editor: In a Chicago hospital two babies were born just at the same time; both males. They were tagged routinely. Later, it was claimed they had gotten mixed: Thereby adding commercial grist to the day's news, trouble for the hospital, distress for four parents, not to mention embarrassment for the courts and the scientists.

Here was need for a Solomon to untangle the snarl. Why—what difference did it make outside of sentiment? since none could tell the difference!

Science could not tell? It was embarrassing for science!

Then is it all just a gamble—"Heads you win"? Had effort been made by science or the parents to produce a perfect child? "Nine hundred and ninety-nine babies" are just accidental anyway. Were these two boys then just two more babies? If not, what would make one child *right* or better or different? Seed? Whose seed—father's or mother's? Science does not know, and parents cannot know; and, really, parents 999 are not interested until the baby is born—scientifically! *That must* be scientific! —After all desperate effort at prevention.

Suppose parents *were* interested scientifically, sooner, before!—"In the beginning". Interested eugenically in begetting children, instead of accidentally.

Isadora Duncan was reported in the press to have proposed to Bernard Shaw that they mate to produce the brains of a genius in the body of a goddess. To which it is alleged that Shaw replied, "But how can we know? the product might have *my* body and *your brain!*"

Science is baffled, for the time.

Not only is the question of eugenics here involved—though our friends the birthcontrollers do not seem to think the begetting of children in wedlock is ever, or very rarely, more than accidental (What do you think?)—and since we cannot tell whose seed are *right*, whose seed contribute the controlling or dominant influence, nor which seeds bear the dominant hereditary taint of feeble-mindedness, or what have you? And, since Science cannot say what is in the *genes*, or whether the genes or the heredity or the environment causes physical deformity, feeble-mindedness; or, if each individual human being is just unique! Then shall the mother, outside of sentiment, simply take the baby handed her and proceed with the job? Supposed they *are* mixed and that she does not know it? Is there any difference? Many plays and screen pictures show a difference in results! Read Mark Twain's "Puddinhead Wilson". But is there a difference in babies? Experts cannot say. George A. Dorsey asks, in the above mixed babies case, "What did the Chicago experts have to expert on?

The chips! Just the chips. But chips from whose block? Science searches the woodpile.

Solomon says, "Bring the children into court!...Ah!" says he, "this boy has a Hittite nose! Let's see, the father has a nose like mine! The mother's nose is turned up, now, therefore there is, just arrived, a Hittite nose *gene* in the 'woodpile'."

The doctor says the product will be the result of "the embryonic-material nourishment and uterine barrage of modern physiologic warfare". Then too, besides this, who can say in later years what the endocrine hook-up will do for them:—to say "we are the same that our fathers have been" rather than we are what the function or dysfunction of our endocrine glands make us.

The welfare worker says there may be the *genes* of a prize fighter but the dominants of an artist whose environment produces a bent book-keeper, or a radio crooner.

So Solomon wisely adds, "Bring the children back to me when they are home from the University". O mores! O penates!

While the rule of transmission, the laws of certain physical traits (fairly well established) make us, the exceptions, generalities and averages are baffling. And the environmental influence may outweigh and obscure hereditary gifts*! Then shall the mother ask, "Is this my baby?"

Shall we hereafter dream in our philosophies, and eugenicly beget babies, or follow the orthodox natural selection,—or just bring one home? It seems a far cry to the eugenic baby, the elimination of the moron offspring. The sterilization of the criminal unfit seems realized.

HARRY NELSON JENNETT

*Just recently we have been granted by scientists that the general practitioner's contention that there is much in environment is well founded.

MEDICINE VS. SURGERY

To The Editor: Your editorial on the family physician in your issue of September is right along my own line of thought and I am offering a few remarks on the subject as I see it. We older men are dying off pretty rapidly and so cannot step in and fill the breach. The young men are not being educated as family physicians, but rather as specialists, for the specialty is the thing that brings in the coin, you know, and in bigger bunches than does general practice.

Why, I will be hanged if I know, but the specialist is supposed to be a rather superior sort of being and so worthy of greater pay and more homage. The poor cuss who studies medicine these days has to blow in a lot of money before he can earn a cent and because of his rather huge investment he does not see his way to enter general practice, which is such poor pay, you know. We medical men simply eke out sort of an existence at present and all because the dear people have been told that surgery is the "big show" and that drug medication is all taboo, or nearly so.

I agree with all you have written on the subject, but you are not going to get many of your family physicians until some radical changes are made and that in many ways. We must begin teaching the public that surgery is *NOT* the "whole show" and that frequently patients may do better under medical treatment. We must also teach the truth of this to many of our medical men, even some of our older ones who have gone into the specialties and have become of the one track mind type. When we again begin teaching our students something regarding our staple, low priced drugs and bring a lot of them back on our list, then we may look for a return of the family doctor. He cannot come until he knows something about other than the high priced drug specialties, which are offered almost solely because they give a "bigger profit," as the president of one of our leading pharmaceutical concerns said a few years ago. When we again begin learning something of the simples of Galen and other of our forefathers, then will we become fair family physicians.

I happen to be secretary of the staff of our local hospital and so see all the case reports in which death has intervened. I also see the mortality reports and I have not been able to see that treatment is any better or mortality any lower than either were years ago and before we had all this "higher medical education."

GEO. L. SERVOSS, M.D.
Editor & Manager of Medical Insurance.

"Mummie, you're not nearly as pretty as Nurse."

"Don't you think so, dear?'

"No. We've been walking round the park for an hour and not a single soldier has kissed you!"—Humorist.

90 PER CENT OF THE DENTAL PROFESSION ENDORSE THE FIRST MINORITY REPORT OF THE COMMITTEE ON MEDICAL CARE.

Dr. G. Walter Dittmar, president of the American Dental Association, has sent us an illuminating communication. Dr. Dittmar's statement confirms an impression that has been in the mind of the Editor for some time, namely, that the dental profession of America has not been stampeded into approving a system of medical care that will ultimately bring about a system of state medicine or the Dole system that that has been discredited in England and European countries. We quote Dr. Dittmar in full:

Chicago, Jan. 25, 1933

To The Editor:

I have just had an opportunity to read your most excellent editorials in the January issue of your journal, "Happy New Year" and "The Majority Report of the Committee on the Costs of Medical Care" etc., plus the many citations from lay editorials. May I congratulate you and compliment you on your most excellent presentation.

May I add that it is my belief that more than 90% of the dental profession of America endorse the First Minority Report in spite of the position taken by the members of the dental profession acting on the committee.

Personally I'm with you 100%. *More power to you!*

G. WALTER DITTMAR.

VASCULAR DISEASE

N. W. WINKELMAN, Philadelphia, and JOHN L. ECKEL, Buffalo (*Journal A. M. A.*, Dec. 3, 1932), report in detail, six cases and state that no consideration of vascular disease of the spinal cord can be complete without a survey of its blood supply. Lesions of the spinal cord can result from vascular disease, such as arteriosclerosis, thrombosis, rupture or emboli. The lesions may be small and scattered or involve a complete transverse level. The scattered small lesions may resemble multiple sclerosis. The transverse softening may resemble a compression syndrome. Syphilis plays an important rôle in vascular disease. Unusual conditions, such as angioma and carcinoma, must be kept in mind in the diagnosis of lesions of the spinal cord.

The washing of a syringe with alcohol before drawing blood for the Wassermann test, may give a false reaction.

Original Articles

ACUTE SURGICAL ABDOMINAL CONDITIONS IN CHILDREN*

BERNARD PORTIS, M.D., Ph. D., F.A.C.S.
CHICAGO

While children may suffer from the various acute surgical abdominal conditions which occur in adults, it is very important to emphasize that each period in human development seems prone to be afflicted with characteristically individual pathological processes and their clinical manifestations. In the new born and very young infants, developmental abnormalities are frequent and this fact must be considered in interpreting the resultant symptoms.

The diagnosis of acute surgical abdominal lesions in childhood is sometimes very difficult and requires very critical observation and analysis by both the surgeon and pediatrician. There are two features, among others, which add to this indecision. First, the reflex abdominal symptoms which may accompany the acute infectious diseases, and second, intestinal colics associated with gastro-intestinal disturbances. The following diagnostic aids will be considered before reviewing the author's cases.

The history, as ordinarily obtained from the parents, should bring forth several facts. The sequence of symptoms may give some clue to the underlying process and more especially the onset, the type, and location of the pain. Gastro-intestinal disturbances are usually present, but one should remember that starvation acidosis may be produced by and also cause persistent vomiting, and is not necessarily of surgical importance. The past health should receive full consideration, and exposure to or the presence of infectious diseases should be eliminated.

The physical examination, important in all patients, is of extreme importance in children so as to rule out all extra-abdominal lesions, and hence localize the trouble within the abdomen. The surgeon has much to learn from the pediatrician, in the care, dexterity and gentleness, in examining these young patients, and especially in eliciting tender regions and muscular rigidity. Rectal examination should be made, as not infrequently local evidence is present which definitely establishes the diagnosis.

Laboratory and x-ray studies should be utilized when indicated. It may be needless to state that no child should be operated upon without a urine and blood examination. The differential white blood count in infants normally shows a high percentage of lymphocytes, and when altered frequently indicates an inflammatory condition. Ordinarily, there is an accompanying leukocytosis. The urine examination will help exclude cystitis, pyelitis, nephritis and calculi, as the primary lesion. However, red blood cells in the urine are not infrequent with the retro-cecal form of appendicitis. The stool should be examined, especially in conditions simulating intestinal obstruction, as blood is usually present in intussusception. Search should also be made for intestinal parasites and ova. Further, the type of bowel movement may indicate some nutritional disturbance. The x-ray studies may be required in differentiating chest conditions, and also for intestinal obstruction. Likewise, the oral administration of barium is very helpful in the diagnosis of congenital atresias of the intestinal tract, as its rectal administration in intussusception or volvulus.

The material included in this paper represents an analysis of 158 cases operated upon by the author from his private and the children's service at the Michael Reese Hospital. Various authorities have been consulted in some of the less frequent conditions. The diagnosis, differential diagnosis, and therapy of the acute surgical conditions will be considered.

Acute Appendicitis. Acute appendicitis was the most frequent acute surgical lesion and was represented by 145 cases. The children under two years of age presented symptomatology somewhat different from those over two. Many of the younger group were not seen or the disease recognized until peritonitis was well established; again the onset in a few was associated with chills, and one had convulsions. In general, appendicitis in the first two years of life presents a bizarre picture, which renders the early diagnosis difficult. However, abdominal

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cramps associated with vomiting, local rigidity, tenderness, mass formation and leukocytosis, should make one suspect the possibility of appendicitis.

In the children over two years of age, the symptomatology was more like the adult form. There were a few special features which should be considered as the early diagnosis was essential in reducing the present high mortality of appendicitis of childhood. The onset in most of the children was not very sudden, and was ushered in with mild to more severe colicky attacks of abdominal pain. The pain, in the majority of cases, was generalized and did not confine the child to bed; however, it had a tendency to recur with increasing severity with the progression of the pathological process and later localized in the right lower quadrant. The attacks which started during the evening or night seemed, for some unknown reason, to be of a more severe nature.

Some form of gastro-intestinal upset was constant, although vomiting occurred in only 77%, while the others complained of anorexia and nausea. The vomiting was not severe, frequently contained bile and recurred only a few times. Fever was present in all the patients within the first twenty-four (24) hours, but in five there was a rapid rise to 104 within eight (8) hours. In these children the leukocyte count remained low and the appendices were gangrenous at operation. Leukocytosis of 12,000 to 20,000 with a polynucleosis was the rule, but this finding, while important, should not be the determining factor for surgical intervention. Young infants may show a marked lymphocytosis with acute appendicitis. The urine was essentially negative, except a few showed red blood cells, and in these cases operation demonstrated a retrocecal position of the appendices. Marked acetonuria was noted in several patients with severe vomiting, but because of its association with conditions other than appendicitis this finding did not help in the differential diagnosis.

Physical findings were usually quite definite. However, some children with quite advanced appendicitis frequently presented outward appearances of comparative comfort. Localized tenderness was present in the right lower quadrant, but the degree depended somewhat on the proximity of the appendix to the anterior abdominal wall and was least marked in the retrocecal variety. This pointed tenderness was found in several different locations when the rotation of the cecum was not complete. Rebound pain, elicited by suddenly letting up the compressing hand, was found in the cases of peritoneal inflammation or free exudate, and was considered as evidence of a progressing process. Involuntary muscular rigidity was sometimes difficult to ascertain, but when present was diagnostic. Rectal examinations were always performed and were found of aid in the diagnosis of low lying appendices and in the presence of pelvic exudation.

Many patients did not present the above symptomatology and physical findings in their entirety and required a certain period of observation before contemplating operative intervention. The temperature curve, leukocyte counts, and repeated physical examination were made at frequent intervals as an aid in this decision. Catharsis, sedatives, and solid food were interdicted during this period.

Peritonitis. Peritonitis, other than of appendicial origin, was quite rare. There was one group of five cases diagnosed preoperative as hematogenous peritonitis. This term indicated the onset of an inflammatory process of the peritoneal cavity originating from some extra abdominal focus and reaching the abdominal cavity by way of the blood stream. Some pathologists deny this possibility and state that the main intra-abdominal lesions, such as mesenteric adenitis or enteritis with migration of the infectious process have been overlooked. These five children had a recent upper respiratory tract infection before the onset of what appeared to be a severe peritoneal inflammation. One of my cases so diagnosed proved at postmortem to be an ulcerative enteritis, but with no obvious perforation. Three other cases had severe mesenteric lymphadenitis. The fifth case showed no obvious lesion, survived the exploration, so that the etiology remained undetermined. I still believe the hematogenous peritonitis may occur but in all probability

some of the cases so diagnosed are in reality caused by direct extension.

Tuberculous peritonitis usually arises from some focus elsewhere, especially the glands, lungs, bones, and genito-urinary tract. The mode of infection may be hematogenous, lymphogenous, or by direct contiguity. The acute form may be localized, but the generalized form, with numerous miliary nodules and excessive free exudate, is more frequent in children. This latter type may be ushered in by all symptoms simulating acute appendicitis although the duration of the initial period is usually prolonged and frequently associated with diarrhea. Two cases upon whom I operated were of this nature, and the true character was not determined until operation, except the presence of fluid suggested tuberculosis as its possible etiology, although no obvious foci of tuberculosis were demonstrable.

Pneumococcus peritonitis is a comparatively rare condition and no case was encountered in this series. It may appear in either of two forms, namely, the primary which arises chiefly in the female from a pneumococcal infection of the genital tract, and the secondary form, which is usually preceded by pulmonary infection. The typical case starts with suprapubic pain, difficulty in micturition and diarrhea. The temperature rises suddenly and may be associated with chills. The infectious process in many cases spreads giving rise to a generalized peritonitis and septicemia with fatal termination. In the minority of cases, however, the exudate usually localizes forming abscesses which if not drained may rupture to the surface, especially around the umbilicus. The physical findings are essentially those of a spreading peritonitis with more marked localization in the lower abdomen. Herpes labialis is frequently present.

Intestinal Obstruction. Intestinal obstruction or ileus may be either mechanical or paralytic. The paralytic form was found to occur reflexly from some extraperitoneal disease, after operations, and associated with peritonitis. The findings of abdominal distention, vomiting, and absence of peristaltic activity associated with the above conditions was diagnostic.

Mechanical or obstructive ileus in children usually arises as the result of congenital atresias of the gastro-intestinal tract, other malformations, intussusception, and abnormal hernial complications.

Two cases of congenital atresia were operated upon. The early onset of repeated vomiting after the ingestion of food aroused the suspicion of a congenital obstruction of the duodenum, but the final diagnosis depended upon the x-ray examination demonstrating its presence. Both of these children lost considerable weight and one was markedly premature. Gastro-enterostomies were performed, but neither survived more than a few days.

Intussusception is the commonest form of intestinal obstruction. Six cases were seen but only four were treated by surgical intervention. The usual manifestation of severe colicky pain associated with vomiting, mucohemorrhagic stools and a demonstrable tumefaction in the lower right quadrant were present and rendered the diagnosis quite simple. Two of the operative cases were of the ileocolic variety and the other two were ileocecal associated with Merkel's diverticulum. Five of the children were under two years of age while the sixth was 10 years old. This last case demands special attention as intussusception at this age is an extreme rarity. He had had two distinct attacks of intestinal obstruction during early infancy and diagnosed by the pediatrician as due to an intussusception and were relieved by barium enemata. Subsequently he suffered from repeated attacks of minor abdominal colics until this last attack which started with very severe abdominal pain and collapse. Vomiting, mucohemorrhagic stools and large abdominal tumor soon occurred. The diagnosis of intussusception was made and immediate operation decided upon. On opening the abdomen a very large dark blue black tumefaction was encountered, and after prolonged manipulation the intussusception was reduced. It proved to have started from a Meckel's diverticulum which had first invaginated itself and this in turn intussuscepted into the ileum which in turn passed into the distal ileum and into the cecum so that the head of the intussusceptions reached the hepatic flexure of the colon. The viabil-

ity of the intestine returned after reduction and the child made a complete recovery. The Meckel's diverticulum was resected.

TREATMENT

The treatment of the above conditions was usually surgical but the time and choice of operation required considerable deliberation. The surgeon's and pediatrician's judgment was frequently taxed to the extreme to make a correct diagnosis. Further, the usual progression of the pathological entity was kept in mind in deciding the optimum time for intervention. The various nonsurgical lesions which simulated acute surgical abdominal conditions were differentiated, and I wish again to emphasize the frequency of this interrelationship. If, after careful examination and observation, there is still a reasonable doubt, an exploratory operation is justified.

I believe in the dictum that once the diagnosis of acute appendicitis is made, operation should be performed without undue delay, and the appendix should be removed if it is humanly possible without subjecting the patient to too great a risk. There were several exceptions however to this rule. Children seen a few days after the attack had presumably started and, showing all outward signs of a subsiding process, were watched carefully and operated on later in the interval when this was possible. The other group also seen late and with an overwhelming peritonitis were treated according to the Ochsner method, with the removal of the appendix or drainage of the abscesses at a later time.

Paralytic ileus of the various origins was treated according to the following plan. Fluids were supplied during the paralytic stage by means of hypodermoclysis only. About 1500 c.c. of either saline or Ringer's solution with or without 5% glucose solution each 24 hours was usually found adequate. The addition of glucose may retard absorption. Gastric lavage was performed in the presence of vomiting and repeated if necessary. The various peristaltic stimulants and enemata were avoided until the intestine showed evidence of recovery of its muscular tone, which required up to 4 days. This method has been found very satisfactory and superior to other forms of treatment in reducing the mortality in this condition.

The treatment of pneumococcus peritonitis, even when diagnosed, is still in dispute. Many surgeons advise early incision and drainage as this tends to prevent spreading peritonitis and septicemia. Others consider surgery contraindicated until localized abscess formation. However, the best reported results were obtained by early exploration and drainage. The concentrated anti-pneumococcus serum has been used with some success.

The therapy of tuberculous peritonitis, likewise, offers many conflicting views. The form associated with serous exudation responds in about 60% to simple exploration, plus the removal of a primary focus if in evidence and localized. Numerous therapeutic measures such as heliotherapy, intraperitoneal injection of air and nitrogen and x-ray exposure have been advised with some beneficial results. The two cases operated upon by the author were definitely benefited by simple laporotomy.

Intussusception was diagnosed in six children and four were subjected to operation. Pediatricians have repeatedly demonstrated the fact that this condition may be treated without surgery in some cases. The various forms of enemata and the bloodless method of Monrad of Copenhagen have been utilized with good results, when the children were seen very early. This form of treatment was limited to the simple varieties, but carries with it the danger of incomplete reduction of the intussusception. Further, it may prolong the period of observation beyond the time limit for even surgical intervention. The two unoperated children were given a barium enema by the pediatrician with complete reduction and restoration of function. The four operated upon were quite readily relieved, and without any period of uncertainty which is always present in non-operative cases. Early diagnosis and decision as to the necessity for operation are paramount to a low mortality.

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DISCUSSION

Dr. H. C. Blankmeyer, Springfield: Mr. Chairman, this fascinating presentation of Dr. Portis is certainly an eye-opener to me. He reported this series

of operative cases practically 92 per cent. appendicitis. What a delightful thing it would be if we could look into that little belly to see what the appendix was like. I think that this is a higher percentage than I have ever encountered in the literature. If it is true, it certainly makes me think that I am pretty far behind the head of the procession in overlooking these little cases.

There are two things that rather startle me when I find a lower quadrant pain in the right side. I find that occasionally, of course, in right lobar pneumonia, and I still wonder if that is not an extension of that process. You find that very commonly in your acidosis cases, and especially those that assume that particular acrodynic posture; and I have seen one or two normal, cute little appendices in a bottle on a mantel that were purely limited cases of acidosis. I wonder if, at the time the appendix was out, why in three weeks more they had a recurring appendicitis. I just do not know where I am when it comes to appendicitis.

It strikes me that this is a delightful bit of keen judgment on the part of Dr. Portis in finding that many appendices, 145 out of 158 operated cases.

I do not believe that he touched upon his idea of etiology. I would like to know what to look for in the history other than symptoms.

Dr. Ciney Rich, Decatur: Mr. Chairman, I enjoyed this paper very much indeed, and I feel that the Doctor is to be congratulated on his report.

I wish to emphasize one thing. Several years ago I heard Dr. John B. Dever say that the time to operate on acute appendicitis is when the diagnosis is made. Some years later I heard him modify that statement; and I feel, as Dr. Portis mentioned in his paper, that where we have these cases of acute appendicitis with an acute, disseminating peritonitis, where we have a distended abdomen that is becoming rigid, where we have a dry skin, and urine which contains casts and albumin—that type of case is much better treated by the Ochsner method until their resistance has come back or until they have developed a localized abscess, in which event the abscess should be drained and usually nothing else attempted.

I would like to mention a case that I had less than two months ago in a youngster 21 months old that had been ill, when I saw the youngster, 7 days, with what was apparently an acute gastroenteritis, with marked diarrhea from the beginning. This youngster at operation had an acute, gangrenous, ruptured appendix with an adherent loop of the ileum, producing an acute and total intestinal obstruction. The youngster had a very stormy convalescence for the first three days and then went ahead to an uneventful recovery.

Dr. Orville Barbour, Peoria: Dr. Portis stresses the cooperatoin with the pediatrician which I as a pediatrician fully appreciate and do not always get from surgeons. I think that one of the most difficult diagnostic problems we have, is to differentiate between appendicitis and other abdominal conditions. Dr. Portis spoke especially of the difficulty in babies under 2 years of age. I have found it so.

One thing that has helped me and probably has you, Dr. Portis, but you did not bring it out in your paper, is that usually when a baby shows signs and symptoms of being extremely ill, and presents signs pointing to the abdomen, especially to the right lower quadrant, if he has an appendicitis he has a comparatively low temperature. I have watched the temperature in those babies very closely. If I suspect appendicitis and find a high temperature, usually the symptoms apparently have proven to be due to a secondary lymphadenitis. When I have an extremely ill patient, with signs pointing toward appendicitis, and it has a low temperature, I nearly always urge the surgeon to operate.

A clinical aspect which causes a good deal of difficulty is that of differentiating between what Dr. Bohrod spoke of, acute lymphoid adenitis around the ileocecal region, and acute appendicitis. It seems to me that in my experience if the case is one of lymphadenitis I usually obtain a history of a previous upper respiratory infection. If I think it is lymphadenitis I try the ice-bag for a while. The ice-bag usually relieves a lymphadenitis where it frequently will not an appendicitis.

Dr. Sumner M. Miller, Peoria: I have noticed one striking thing and that is that one would have expected a larger number of congenital pyloric stenoses in a group of surgical diseases of childhood.

Dr. Bernard Portis, Chicago (closing discussion): I did not include congenital pyloric stenosis as this rarely gives rise to acute surgical abdominal disease, and further many yield to medical management.

I devoted considerable attention to the pathological studies of appendiceal disease when I was pathologist at the Michael Reese Hospital, and in answer to Dr. Bohrod I might state that all tissues removed at operation are sent over to our laboratory for microscopical examination. I personally have examined all the organs removed from the cases included in this report. I quite agree with the doctor in that it is frequently difficult to correlate the clinical and microscopical findings. However, the earliest findings are hyperplasia of the lymph follicles and then a slight raising of the lining epithelium and invasion of polymorphonuclear leucocytes. Still later in the advancing cases, the picture is that of increasing suppurative and gangrenous changes. We have used the oxidase stain as the method of demonstrating the granulcocytes in the final diagnosis of the acute catarrhal appendicitis. I believe that most of the actual cases of acute appendicitis will show evidence of early inflammation, if the features are looked for.

I am sorry I cannot add anything to the etiology of acute appendicitis, as asked by Dr. Blankmeyer. I do not believe that the percentage of cases of acute appendicitis is unusually large when one considers that practically the same percentage is found in any large series of cases. All of the charity and most of my private cases included in this report have been seen by the resident or attending pediatrician,

and we are very fortunate at the Michael Reese Hospital to have the opportunity for close cooperation. This combined study was of especial importance in the obscure cases.

According to Dr. Rich's statement I fully agree with him that each case must be evaluated. The Ochsner method of treatment has proved to be a very satisfactory and sane method of procedure.

A case of progressing, advancing peritonitis, with an overwhelming infection of the body, should not be operated on at that time, but should be treated according to Ochsner's method of fluid administered under the skin or intravenously, no enemas, and the stomach lavaged. If they are going to get well, it will be by this method and no other that I know of.

The recognition of appendicitis in young infants is very confusing. I do not think that the temperature reaction is very definite, so that I cannot draw any conclusions from it. I will illustrate with one case. About four years ago I was called in by a pediatrician to see a young baby 10 months old. It had a peculiar abdominal condition, some vomiting, and mild distention. When I came in to see this child the temperature was slightly elevated; it was sound asleep, and perfectly comfortable. There was one finding which I demonstrated that made me consider operation. This child had rebound pain in the right lower quadrant when the hand was suddenly let up from compression. I have emphasized that to our intern group every time I have had the opportunity: "Look for rebound pain." It is an individual symptom or individual physical finding, and is very important. This little infant, after awakening, had rebound pain when I let up my hand, and I decided to operate. At operation there was a small perforation near the tip of the appendix and a beginning peritonitis.

Just recall the clinical picture of this little 10 month infant: perfectly calm, sound asleep, and yet had this overwhelming process well under way. We removed the appendix and the child made an uneventful convalescence. You all, undoubtedly, have seen little infants such as that.

In summary, I wish to thank all those who participated in this discussion, and I want to say that all these cases were very carefully observed from a pediatric standpoint and a surgical standpoint.

GOOD PROSPECTS

"What's tickling Hickey so?"

"A bootlegger offered him a commission for new customers, so Hickey, by way of a joke, gave him the membership roster of the Civic Dry Enforcement League."

"Well?"

"Today Hickey got a commission check for $550."—Penn. Register.

There is a new cough medicine on the market called Eatalax. Two hours after taking three teaspoonfuls you don't dare cough.—The Green Gander.

CARCINOMA OF THE TONGUE WITH SPECIAL REFERENCE TO TREATMENT BY IRRADIATION*

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Carcinoma of the tongue is a sufficiently common occurrence to warrant serious consideration by the practicing laryngologist. Indeed it is to him that the general practitioner so frequently turns for aid when confronted by such a grave condition.

To those that are at all familiar with the literature, just another contribution on malignant disease of the tongue, would add nothing to what has been established relative to our knowledge concerning this dire affliction. However, there have been many advances especially within the realm of histopathology and irradiation therapy that justify this contribution in order that this knowledge may have a more general distribution. In fact, these advances have had a profound influence upon our therapeutic approach in malignant disease of the tongue.

That all malignant tumors of the tongue do not pursue a similar course is a matter of common experience. Just why one lingual neoplasm will grow rapidly and cause the death of the patient within a period of a few months and another grossly similar mass progress but slowly and only cause death after an interval of a number of years, has caused a great deal of speculation and interest in the pathologist, as well as the clinician. It is only since the work of Broders and McCarty that the study of epithelial neoplasms in attempting to relate their histologic picture to the clinical course that the disease pursues, has been popularized. The classification in four groups as proposed by them has not received universal acceptance. As is well known, practically every histologic type of epidermoid carcinoma may be found affecting the tongue from the adult fully differentiated squamous growth to the more or less totally anaplastic transitional cell or lymphoepithelial variety. For practical purposes a division of lingual carcinomata into three groups has been acceptable, especially to the

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clinician. In the first group are found those neoplasms of comparatively slow growth that exhibit but little tendency towards metastasis to the cervical lymph nodes and the parenchymatous organs. Histologically these neoplasms show a picture of a more or less fully differentiated adult type of a neoplasm, the cell exhibiting elongated pavement like structure with relatively rare mitotic figures and a pronounced tendency towards the exhibition of keritinization, pearl formation and intercellular bridges. At the other extreme, and included in the so-called group three, are those neoplasms that exhibit a high degree of malignancy. In spite of their frequent small size they have a rapid rate of growth with a marked tendency towards early wide and diffuse metastasis and causing death within a relatively short period of time. Microscopically these lesions evidence a picture of an embryonal, anaplastic, undifferentiated growth. The neoplasm is highly cellular with the individual cells exhibiting marked variation in size, shape and staining qualities. Mitotic figures are abundant and adult features such as keratinization, pearl formation and intercellular bridges are conspicuous by their absence.

Between these two extremes is found an intermediate group, the so-called group two. These have features that lie between the adult characteristics of group one and the anaplastic embryonal features of group three.

Clinical experience has enabled us to draw several important conclusions regarding those neoplasms that may be found either in group one or three. Thus, it has been found that trauma has but a minimal effect in accelerating growth or producing metastasis, in the lesions that fall into group one, and therefore, surgical intervention in the early localized stages of the disease, providing the anatomical position is favorable is attended by excellent results. The effect of irradiation is less pronounced and therefore, these growths are more or less relatively radio-resistant. On this account irradiation therapy is frequently disappointing in these types of lingual malignancies. In the neoplasms in group three any trauma, no matter how insignificant, may accelerate growth or metastasis. Not infrequently local glandular, as well as visceral metastasis may have occurred before the growth has reached sufficient size to be attended by clinical symptoms sufficient in intensity to cause the patient to seek medical advice. Surgery has been found to be attended by but poor results and is therefore contraindicated in these types of neoplasms. In many of these growths relatively small amounts of irradiation can produce dramatically rapid disappearance of the growth and these tumors are therefore, radio-sensitive. It follows that in consequence of the poor results with surgery and the spectacular response to irradiation that these neoplasms are best treated by radium or deep x-ray therapy. No such definite statements can be made relative to the neoplasms that are placed in the category of group two. Some may show characteristics that are predominantly of group one and are to be treated along the lines suggested for those neoplasms and others may, of course, show characteristics of group three and should be treated accordingly.

In group three there have been isolated two types of neoplasms that are accompanied by a highly characteristic unique histological picture and are associated with extreme radio-sensitivity—the so-called transitional cell carcinoma and lympho-epithelioma.

The transitional cell carcinoma has a histological structure of strands or sheets of round or polygonal cells with a markedly hyperchromatic nucleus. The lympho-epithelioma, histologically, is composed of a large number of relatively large cells, containing a very small pale staining rim of cytoplasm. The cell outlines are frequently difficult to distinguish and may give one the impression of a syncytial mass. The nuclei are large, occupying practically the entire cell and exhibiting a prominent nucleolus. Throughout the section one finds areas of infiltrations with lymphocytes that may at times be so dense as to practically obscure the underlying cell structures.

These neoplasms have all the characteristics of highly anaplastic malignant growths and are exceptionally radio-sensitive.

These histological studies of the relative degree of cellular differentiation or of the potential malignancies of the growth have been most enlightening from a practical point of view in explaining the success or lack of success with surgery or irradiation in the various types of neoplasms so treated. These histologic criteria

are important, not only in determining whether the tumor is best treated by surgery or irradiation but also is a factor in calculating the intensity of the irradiation dosage. It is to be seen therefore, that the treatment of lingual carcinomata cannot be placed into a routine standard clinical procedure, but becomes a special problem in each individual case. We have elaborated a dictum that the biopsy determines the details of treatment. These studies have also shown that the lack of success with surgery in attempting to treat the carcinomata on the base of the tongue was due more often to the fact that we were dealing with a highly undifferentiated anaplastic growth, rather than the technical surgical difficulties encountered and conversely the highly spectacular and dramatic regressions of apparently hopeless growths in this same region following irradiation are to be explained in the same manner.

Recent advances in surgical technique in the treatment of malignancies of the tongue are not many. The use of surgical endothermy has replaced the cold knife. However, we employ it only in small, more or less localized lesions of the anterior portion of the tongue, that histologically fall into group one. As a precautionary measure the lingual arteries are ligated previous to the attack with the electrothermic methods, otherwise not infrequently an alarming secondary hemorrhage may occur.

Irradiation is one of the most important weapons at our command in the treatment of malignancy of the tongue. However, it must be employed, when indicated, in adequate dosage together with proper screening as well as other technical factors that time will not permit of discussion. Irradiation delivered by direct surface application of only small amounts of radium is mentioned but to be condemned. Interstitial irradiation is highly successful. The best results are obtained by using small amounts of radium or radon, using a screen of at least 0.5 mm. of platinum or its equivalent over a relatively long period of time. If radon is employed we advocate the use of the removable platinum radon containers in order that some of the disagreeable sequellae subsequent to leaving the seeds permanently in the tissues, may be obviated.

The method of implanting the needles or radon implants vary with the size, location and depth of the lesion. Local anesthesia is effected by conductive injection of the lingual nerve and in addition the mucosa over the area may be brushed with a solution of cocaine. In small lesions the implants are placed in palisade formation about the circumference of the lesion at a small distance from its periphery without entering the tumor proper. Larger lesions require the insertion of the needles into the actual tumor itself in addition to the surrounding palisade. Growths in the posterior portion of the tongue may be irradiated by inserting the needles or radon implants into it via the anterior inferior aspect of the tongue or through the skin just above the hyoid bone. A gloved finger placed into the mouth on the back of the tongue acts as a guide to the proper placement of the implant.

One of the most important advances in the treatment of carcinoma of the tongue by irradiation is the use of large amounts of radium at a distance or the so-called telio radium therapy. It consists in the use of one to four grams of radium at a distance of six, ten or fifteen cm. This technical advance bids fair to produce brilliant results especially in the more radio-sensitive types of growths. Unfortunately the tremendous cost of such a large amount of radium, in the neighborhood of $250,000.00, will prevent its use except in the larger clinical centers that have adequate financial endowment. We are indeed fortunate to have at our disposal at the Michael Reese Hospital a four gram pack or bomb which permits us to utilize this most efficient type of irradiation therapy. Lacking such technical means the use of highly filtered deep x-ray therapy may be a more or less acceptable substitute, as it is far better to employ a good dose of x-ray therapy than a poor dose of radium.

The treatment of the neck, in association with carcinoma of the tongue, is just as important as the treatment of the primary growth itself. It must be recognized that microscopic metastatis may be present in the glands of the neck without any palpable evidence. It must also be understood that not all palpable glandular enlargements are necessarily malignant as a fair percentage are infectious. The therapy advocated for the neck is dependent upon the nature of the primary growth, the presence or absence of palpable metastasis, as well as their

extent. If no glandular involvement can be made out grossly the prognosis is, of course, materially improved, especially if the primary growth is one of the adult fully differentiated types of carcinoma. In these cases the neck is subjected to intensive irradiation in any event, preferably by the use of a four gram pack at a distance. If a radium pack or bomb is not available, one may utilize highly filtered deep x-ray or one may systematically needle the neck by the subcutaneous placement of radium throughout the cervical area. Needles containing one and three tenths or two mg. of radium, with a 0.5 mm. platinum screen are employed. After proper preparation under the skin and under gas anesthesia the needles may be inserted along the anterior and posterior borders of the sternomastoid from the clavicle to the base of the skull, below the mandible throughout the submaxillary triangle and just above the hyoid bone. This procedure is carried out on both sides of the neck at the same time. Care must be taken in the proper technical placement of the needles so as to not endanger the mandible, the hyoid bone, the thyroid cartilage and the important blood vessels of the neck. The needles are permitted to remain insitu for a period of from five to seven days. The resultant radio dermatitis so well described by Regaud is an index of efficient irradiation. This method of subcutaneous interstitial irradiation is preferable to the Columbia paste collars that are also advocated.

The presence of palpable nodes modifies the treatment indicated. While conceding that a good percentage of the palpable nodes may not be malignant in practice all glandular enlargements are treated as if they are proven carcinomas.

If the primary lesion in the tongue is an adult type of tumor, a radical resection of the gland bearing tissues is performed. It is frequently necessary to resect the jugular vein with the involved chain of gland and we have, on several occasions, even resected the common carotid artery, on the affected side. Obviously but one internal jugular vein may be removed. A few days following the surgery upon the neck irradiation therapy preferably with the four gram bomb is instituted; lacking the necessary amount of radium one may insert the needles as described above at the time of the neck operation, or if deemed advisable at a later time. However, if the primary growth is of the anaplastic transitional or lympho-epithelioma type no surgery is performed and irradiation as described above, is depended upon.

CONCLUSIONS

1. The problem of therapy of carcinoma of the tongue has undergone radical changes within the past seven years.

2. Malignant epithelial growths of the tongue vary in their histologic structure, biological course and response to irradiation.

3. Adult fully differentiated carcinomata grow slowly, metastasize late and are relatively radio-resistant. They are, therefore, better treated by endothermic excision, if small and localized to the anterior portion of the tongue.

4. Anaplastic, embryonic undifferentiated growths are highly malignant, metastasize early and wide, and are highly radio-sensitive, especially the transitional cell and lympho-epithelial variety. They are best treated by irradiation preferably with the four gram bomb and in association with interstitial radium or radon, if necessary.

5. The gland bearing area of the neck must receive appropriate attention in every case.

6. Where no palpable glands are present in the neck prophylactic irradiation is necessary, preferably with a four gram pack.

7. Palpable glands, secondary to a fully differentiated primary growth in the tongue are best treated by a radical gland resection in conjunction with irradiation.

8. Palpable glands, secondary to an anaplastic undifferentiated primary growth are treated by irradiation alone and surgery upon the neck is contraindicated.

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DISCUSSION

Dr. Samuel Pearlman, Chicago: I am glad to have the opportunity of discussing Drs. Beck and Guttman's paper. Cancer of the tongue is not a very common disease, and most of us in our private practice see but few cases in a life time. I know that Drs. Beck and Guttman have seen a great many cases but I must admit that I do not envy them their distinction. Most patients end the same way; they die of the disease. Years ago, Butlin wrote a classic treatise on diseases of the tongue. Compared with our own day his results were very good. The treatment then was all surgical. The third edition of this book was published a short time ago and edited by two of his former associates, Spencer and Cade. What was astonishing in the new edition was the relegation

of the surgical attack on cancer of the tongue to the background and its replacement in very large part by radium. The surgeon, it seems, has tried surgical treatment for cancer of the tongue and is more than willing to give it up for something different. Cancer of the larynx Butlin once said is "a dire disease"; cancer of the tongue, too, we will all agree is a dire disease. The use of radium in its treatment appears to be the one bright spot of the present time. In many instances the lesion disappears for years at a time. Even in treatment of metastatic glands in the neck, radium is replacing block dissection or is being used not only externally but deep in the neck after surgical exposure.

Dr. M. Reese Guttman, Chicago (closing): Unfortunately my associate, Dr. Beck, is not able to be present. He had fully intended in the discussion to bring out the fact that not one single case of a large series of malignancies of the posterior portion of the tongue that he had seen in thirty years of practice had remained well, prior to 1926. Since that time there have been several technical advances in the use of radium that has permitted a more hopeful outlook. A review of the literature emanating from the large radium centers throughout the world will show that something between thirty and forty per cent. of the growths in this region may be cured or at least held in abeyance for a period of over five years. Surgery, unfortunately, is followed by poor results and therefore, irradiation is the treatment of choice of cancer of the posterior third of the tongue. Surgical resection is only indicated when the growth is small and limited to the anterior portion of the tongue. The best results are to be obtained in the use of telio radium therapy or the so-called bomb. There have been recent advances in deep x-ray therapy with the development of machines that are capable of producing one million or more volts. In Germany deep x-ray therapy machines of three and one-half million volts are said to have been engineered. The ray emitted from an x-ray tube subjected to three and one-half million volts closely approaches the gamma ray produced by the disintegration of radium. It is possible that in the future this type of deep x-ray therapy, which is purely experimental at the present, may be an important factor in the treatment of carcinoma.

Insurance man (putting questions to cowboy): "Ever had any accidents?"

"No," was the reply.

"Never had an accident in your life?"

"Nope. A rattler bit me once, though."

"Well, don't you call that an accident?"

"Naw, he bit me on purpose."

"Agatha has the most exaggerated idea of her abilities."

"Why so?"

"Her mother wrote me that she had double pneumonia and was in bed with three doctors."—Rice Owl.

APPENDICITIS MORTALITY IN 1605 CASES*

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This paper is a continuation of a study of 1605 consecutive cases involving inflammation of the appendix and taken from the records of Passavant Memorial Hospital, Jacksonville, Illinois.

The first[1] paper classified the cases in four groups and showed the number of cases, mortality, etc., for each operator, in each group. The second[2] paper sought a basic mortality rate by which operators and authors could compare their work, and determine whether it met the average standards of such work by operators in general as reported in our current surgical literature.

Before taking up the records of the deaths in this group a word about the method by which the Hospital arrives at its facts will be necessary. As cases are discharged from the Hospital a "Summary Card" (Table 1) is made for each diagnosis but it also carries a reference number to each of the several diagnoses which may belong to the case. This is accomplished by the use of numbers from the author's expansion of the Medical Division of the Dewey Decimal Classification.

SUMMARY CARD

Index No. 616.3452.087. **Passavant Hospital No.** 16807

Cross Reference No's. 618.11 087; 618.12.087.
Date Admis. 12/27/22 **Date Disch.** 1/24/23 **Age** 17. **Sex** F.
Civil Con. S. **Occupation** Student.
Attended by Carl E. Black **Referred by** Josephine Milligan
Days Illness prior to entering Hospital Ten (10)
Days in Hospital prior to Operation Three (3)
Diagnosis Appendicitis and Salpingitis—sub-acute.
Pathology Sub-acute inflammation of Appendix and Chronic inflammation of right tube and ovary. Many adhesions.
Operation Appendectomy and Salpingo-oophorectomy.
Complications Patient made prompt recovery without wound infection or peritonitis.
Remarks No pus seen and wound closed without drainage.
Condition on Discharge Recovered—condition excellent.

Table 1. Card used by Passavant Memorial Hospital, Jacksonville, Ill. (Card used is 3 x 5 inches.)

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*Read before the Section on Surgery at Annual Meeting of the Illinois State Medical Society, Springfield, Illinois, May 18, 1932.

1. A plan for Measuring Surgical Results in a Community Hospital. Read before the Hospital Standardization Conference, Clinical Congress of the American College of Surgeons, New York, Oct. 12-16, 1931. Bulletin of the American College of Surgeons, March, 1932.

2. Appendicitis Statistics. Read before the Western Surgical Association, Denver, Colo., Dec. 5, 1931. The Western Journal of Surgery, April, 1932.

The illustrative card, for example, shows that case No. 16807 had an operation on the appendix (616.3452.087) and also operations on the fallopian tube (618.11.087) and the ovary (618.12.087). Therefore three "Summary Cards" will be found in the files for patient No. 16807. All the data necessary for the study is to be found on the "Summary Card" and it is the combination of this data for all cases of a given group that completes the study. The cards for a given period are then separated into groups by surgeons, and a sheet (Table 2) made for each surgeon, for each disease, or operation, for each year. This shows the work by months and permits us to make a seasonal study of each disease or operation and also to show the relation to age, sex, civil condition, occupation, etc. By combining the work of members of the staff for any given period we are able to show not only the work of each surgeon but also the work of the Hospital for the period as illustrated in Table 3.

Appendix—Chronic infection. Surgeon N

Month	Number of Patients	Days in the Hospital	Illness prior to Entering Hospital	Days in Hospital Prior to Operation	Ages								Sex		Civil Condition		Condition on Discharge					Infection					Other Diseases and Operations					Appendix			Other Data						
					Under 10	10 — 19	20 — 29	30 — 39	40 — 49	50 — 59	60 — 69	70 and over	Male	Female	Single	Married	Unimproved	Improved	Recovered	Died	Died of Multiple Op.	Pus Present	Peritonitis	Spreading Peritonitis	Post-operative Infection	Post-op. Complication	Other Diseases	Other Major Op.	Other Minor Op.	Two Other Major Op.	Three Other Major Op.	Only Appendix Removed	Appendix not Removed	Appendix Pathology	Pre-operative Rating of Risk - Good - Fair - Bad						
																																					Referring Physicians	Autopsy				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
January	3	22, 21. 3					1	1	1				1	2	1	2		1	2									1		1		1	1								
February	1	24					1							1	1				1												1										
March	2	14, 14					1		1				1	1		2			2												2										
April	2	29, 39						1	1				1	1		2			2									2		1											
May	1	42								1				1		1			1									1		1											
June	5	2					1							1		1		1									1					1									
July	3	16, 26, 21, 30 39				1	2		2					5	2	3			5									4		1		1									
August	3	35, 31, 3				2				1			1	2	2	1		1	2								2					2	1								
September																																									
October	3	16, 15, 23				1	1	1					2	1	2	1			3													2	1								
November	2	14, 28			1		1						1	1	2				2									2		1										
December	1	21				1								1	1				1								1					1									
Totals	24				1	5	8	3	5	2			7	17	11	13		3	21								4	10		5		11	3								
Average		21																																							
Percentage																																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43

Table 2. Check sheet used by Passavant Memorial Hospital, Jacksonville, Ill. A separate sheet is used for each Surgeon and for each disease.

Complete Summary of All Appendix Cases 1923 (1916) to 1931, Incl.

Surgeon	Acute				Chronic				Abscess & Perforation				Gangrenous				Totals			
	Cases	Died	% of Deaths	Av. Days in Hosp.	Cases	Died	% of Deaths	Av. Days in Hosp.	Cases	Died	% of Deaths	Av. Days in Hosp.	Cases	Died	% of Deaths	Av. Days in Hosp.	Cases	Died	% of Deaths	Av. Days in Hosp.
K.....	158	4	2.56	11+	167	5	2.90	17	46	4	8.34	20+	4	1	25.00	13+	373	14	3.75	15+
N.....	194	7	3.60	17+	316	4	1.26	20	73	17	23.28	17+	44	5	11.60	25+	626	32	5.11	19+
U.....	180	4	2.22	17+	140	8	5.71	20+	46	13	28.36	25+	28	5	12.86	28+	394	30	8.08	20+
Total.....	530	15	2.79	12+	623	17	3.29	19+	165	34	19.66	20+	76	11	18.15	22+	1393	76	5.64	18+
E.....	14	0	0.00	8+	6	0	0.00	14+	2	0	0.00	25+	0	0	0.00	0	22	0	0.00	15+
Misc.....	10	0	0.00	11+	10	0	0.00	11+	5	1	20.00	26+	0	0	0.00	0	25	1	4.00	16
Q.....	18	0	0.00	13+	6	0	0.00	13+	3	2	66.66	10+	1	0	0.00	22+	28	2	7.14	14+
B.....	10	0	0.00	17+	12	0	0.00	14+	10	0	0.00	27+	2	0	0.00	24+	34	0.	0.00	20+
W-1.....	24	0	0.00	15+	19	0	0.00	19+	1	0	0.00	14	2	0	0.00	47+	42	0	0.00	23+
A.....	20	0	0.00	14+	31	0	0.00	15+	6	1	16.66	21	1	0	0.00	24+	59	1	1.69	15+
Total.....	96	0	0.00	13+	84	0	0.00	14+	27	4	17.22	20+	6	0	0.00	29+	210	4	2.15	17+
Grand total	626	15	2.79	14+	707	17	3.25	16+	192	42	22.31	20+	82	11	13.50	26+	1603	80	4.88	17+
																	Error 2			
																	1605			

Table 3. Shows the details for each operator in Passavant Memorial Hospital with the cases in groups. The first group represents the regular operators and the second group what might be called the "occasional operators," that is, those who have had less than 35 cases in any one group. It is interesting to note the comparative mortalities of the two groups. Contrary to most statistical reports, the "occasional operators" have a considerably lower mortality than the regular operators.

If these cards and sheets are kept from day to day as patients are discharged it is not burdensome to the Record Librarian and enables the Hospital to know just what its staff is doing.

It is an inventory and balance sheet of the professional work. You will notice that the plan is worked out in such a way that no one but the Record Librarian knows the name of the patient or the names of the operators or physicians. The first is known by its Hospital number and the second by a key letter. The name of the patient can be obtained by following the case number back to the admission card. The Record Librarian arranges a new key of letters for the doctors in each study made.

Originally the operations on the appendix were selected for this study simply because it was the most frequent major procedure and was well adapted to show the quality of work being done by the staff. As you will notice in Table 3 the combined mortality for the 1605 cases for the period was 4.88%—that is, there were 82 deaths. The table only shows 80 deaths and 1603 patients as there were two deaths finally eliminated as not meeting the requirements of that study but they are included in this present study.

It is claimed by some that the mortality from appendicitis has been increasing. While the statistics brought forward are not conclusive, there is room for argument. The main difficulty is with the reasons brought forward for the increase. Among these is the fact that many physicians with no claim to special surgical training are operating on these cases. As you will note, in Table 3 of this paper, my statistics do not bear out this conclusion as E.B.Q., etc., who are classified as "Occasional Operations," (that is, they did not have sixty (60) cases in nine years), had a lower average mortality rate than the three regular surgeons. Again in my second

paper on "Appendicitis Statisties," Quain of Bismarck, North Dakota, and Harbin of Rome, Ga., reported much lower mortality rates than Deaver, Gatch and a number of others who operate in large Metropolitan Clinics. This is true notwithstanding the faet that in Harbin's second report the statistics represent 663 operators and 6333 cases. It shows the influence of a eampaign among hospitals, for better work. Another reason for questioning the statisties used to prove an increase in the operative mortality of appendicitis is the effort to compare death rates from the registration area or from the country at large or from other countries with various operative mortalities reported.

Tables 4 and 5 give the ages, sex and civil eondition of the eighty-two patients that died. These facts have no special significance

Ages of Patients at Death—Appendicitis

Ages in Years	10–	10-20	20-30	30-40	40-50	50-60	60-70	70+	Total
Acute Cases.....	2	1	4	4	1	3	1	2	18
Suppurative Cases..	5	7	5	3	6	1	0	1	28
Gangrenous Cases..	3	3	2	2	2	5	1	0	18
Chronic Cases.....	0	0	3	4	5	2	4	0	18
Total for each age	10	11	14	13	14	11	6	3	82

Table 4. Ages of patients who died of appendicitis given in groups and totals.

Sex and Civil Condition of Patients Dying of Appendicits

	Male	Female	Total	Single	Married	Total
Acute Cases.....	10	8	18	6	12	18
Suppurative Cases..	16	12	28	15	13	28
Gangrenous Cases..	11	7	18	10	8	18
Chronic Cases.....	2	16	18	2	16	18
Totals.....	39	43	82	33	49	82

Table 5. Sex and civil condition of patients who died of Appendicitis.

as to the cause of death except in a negative way. All classes seem to be equally involved, or at least there is about the same ratio as those afflicted with disease of the appendix which recover.

The questions surrounding the duration of illness are much more to the point of this presentation. This question is set out at some length in Table 6. In the first column is given the duration of illness prior to entering the hospital. The legends at the side of the chart divide them into three groups, namely: early cases, late cases, and neglected cases. I realize that the group of early eases is too generous. It is doubtful whether a case of three days duration should be regarded as an early case. It would be better to regard all cases of more than forty eight hours as *late cases,*

There is a decided increase in mortality after the first twenty-four hours as shown by many competent reporters. Some surgeons classify all cases of more than twenty-four hours as late cases. Evidently those referring cases to our Hospital have not been sufficiently impressed with the great advantage in immediate surgical relief in appendicitis. This fact is fully borne out by our statistical showing.

In sixty eases our records had definite information of the length of illness prior to entering the hospital. Only thirteen of those that died were sent in within the first twenty-four hours, and ten within the first forty-eight hours. All the others were very late, and two had been sick fifty or more days.

Column two shows the time from entering the hospital until operation. Here we see that forty-three cases were operated on immedately after admission and twenty on the next morning. This is a total of sixty-four practically immediate operations, out of the total of eighty-two cases. Those that were operated on the morning after admission were practically all cases admitted in the night or late afternoon previous.

Column three shows the length of time the patients survived following operation. That is twenty-seven cases died within the first twenty-four hours. These facts will be enlarged on later.

Column four gives the total length of illness for the eighty-two deaths as far as the records were complete and their incompleteness pertains almost wholly to the failure on the part of the attending physician to record the illness prior to entering the hospital.

There were twenty-three such cases. Twenty-two cases had a total illness of five days or less, and twenty-one cases were ill between

APPENDICITIS DEATHS
Passavant Memorial Hospital, Jacksonville, Illinois
DURATION OF ILLNESS

	Time in Days	Prior to entering Hospital					Entering Hospital to Operation					From Operation to Death					Total Illness					
		Acute	Suppurative	Gangrenous	Chronic	Total	Acute	Suppurative	Gangrenous	Chronic	Total	Acute	Suppurative	Gangrenous	Chronic	Total	Acute	Suppurative	Gangrenous	Chronic	Total	
	0						6	22	13	2	43			1	1	2						
	1	1	7	3	2	13	4	5	4	8	21	6	5	7	7	25						
Early Cases..... 30	2	3	6	1		10	2			1	3	2	3	1	1	7						22 Cases
	3	3	1	3		7	1			1	2	2	4	2	2	10	2	3	1	1	7	
	4	2	5	4		11								1	1	2		2	2		4	
	5		2	1		3				1	1	1	5			6	4	3	4		11	
Late Cases..... 18	6			1		1				1	1	1	2	2		5	2	3	1		6	
	7	2		1		3	1			1	2	2	1		2	5		4	2		6	
	8																1	1	1		3	21 Cases
	9																		1		1	
	10	1				1				1	1		3	1	1	5	3	2			5	
	20	1	3	1	3	8				2	2		2	1	1	4		1	1	1	3	
Neglected Cases..... 12	30				1	1							1	1	1	3	1	2	1	3	7	16 Cases
	40																	1		1	2	
	50	1			1	2								1	1	2	1	1	1	1	4	
	No Operation						4		1		5	4				4						
Not Stated..... 22	Not Stated	4	4	3	11	22		1			1		2			2	4	5	3	11	23	23 Cases
Total..... 82	Total.....	18	28	18	18	82	18	28	18	18	82	18	28	18	18	82	18	28	18	18	82	82 Cases
		Average 7 days					Average 2.8 days					Average 6.7 days					Average 13.6 days					

Table 6. An analysis of the length of illness in patients who died of appendicitis. The table shows (a) Illness prior to entering hospital (b) Time from entering hospital to operation (c) Time from operation until death (d) Total length of illness, and (e) Early, late and neglected cases.

six and ten days. The average illness of all cases was thirteen and six tenths days, but this average includes sixteen cases that were ill from twenty to fifty days.

Such facts do not make us very happy about our results and the purpose of this analysis is to seek the reasons. Theoretically, at least, no case of appendicitis should die, and whatever the cause may be, the blame is placed at the doors of the surgeons whether it belongs there or not. We are trying to find out how much of it belongs there.

This brings us to Table 7. Here again the cases are divided into four groups. In seventy-six of the eighty-two cases the clinical history justified the diagnosis. There were six in which there were diagnostic errors which influenced the result. For example, one of these plainly had a pneumonia at the time of operation and died of pneumonia. On the whole the diagnoses were well supported.

As to the second point we ask "should operation have been postponed?" This question requires some explanation. You will notice that

Analysis of Case Records of Appendicitis Deaths (1916) 1923-1931
Passavant Memorial Hospital, Jacksonville, Illinois

	Acute 18		Suppurative 28		Gangrenous 18		Chronic 18		Totals 82		Total Cases
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
Did clinical history justify operation?	15	3	28	0	18	0	15	3	76	6	82
Should operation have been postponed?	11	7	21	7	15	3	10	8	57	25	82
Was too much surgery undertaken?—(at the time)	11	7	17	11	14	4	11	7	53	29	82
Was pre-operative support adequate?	4	14	5	23	1	17	2	16	12	70	82
Was post-operative support adequate?	5	13	5	23	1	17	2	16	13	69	82
Was patient treated medically too long?—(more than three days)	6	12	8	20	9	9	4	14	27	55	82

Table 7. An analysis of the records in answer to the questions (a) Did chemical history justify operation? (b) Should operation have been postponed? (c) Was too much surgery undertaken (at the time)? (d) Was pre-operative support adequate? (e) Was post operative support adequate? (f) Was patient treated medically too long?

we have indicated that in fifty-seven of these cases we think the operation should have been postponed. This opinion is based on the fact that the records show that the patient had not been studied with sufficient care. The laboratory work was incomplete or showed plainly that the case was a poor operative risk, and no adequate effort had been made to give the patient needed support.

These questions are answered more specifically in the next four questions. When we ask whether too much surgery was undertaken we mean "considering the condition of the patient." By looking at Table 10 the basis of our conclusions will become clear as will also the questions regarding pre-operative and post-operative support. It is also plain from the records that twenty-seven cases were treated medically entirely too long. It is too bad that the public eye cannot see that the onus of these cases does not belong on the surgeon.

In Table 8 we have followed the method used by Gustaf Petren of Lund, Sweden, in making an analysis of the deaths in the surgical clinic of the University of Lund. You will notice that forty-one, just one-half, of these cases died of the "primary lesion" and "errors in diagnosis" and "technically faulty or incomplete operations" accounted for thirteen of the other half. This leaves twenty-eight cases in which death was caused by some other factors which may be regarded as a complicating disease.

Appendicitis—Causes of Post-Operative Deaths

	Acute	Suppurative	Gangrenous	Chronic	Totals
Primary disease or lesion itself	6	17	14	4	41
Bad general condition. Shock	2			2	4
Errors in diagnosis	5	1		1	7
Technically faulty or incomplete operation	1	3		2	6
Post-Operative infection		3		2	5
Special post-operative complications. Ileus		1	1	1	3
Pneumonia	3	2	1	3	9
Myocarditis. Acute dilatation of heart			2	2	4
Pulmonary embolism. Thrombosis	1				1
Uncertain cause (often despite autopsy)		1		1	2
Totals	18	28	18	18	82

Table 8. An analysis of post-operative deaths, after the plan of Gustaf Petren, showing the causes of death under several headings.

Post-operative infection accounted for five deaths which is entirely too high, but is low when taken as a proportion of the whole group of 1605 cases. While it has not been computed for all cases it is fair to assume that 5% of all

cases had post-operative infections. This again is entirely too high and shows faulty technique.

Nine died of pneumonia although at least one of these was terminal in a peritonitis case and in our list of deaths is so classified. (See Table 7.) It is worthy of note that all the pneumonia deaths except one (nitrous-oxide oxygen anesthesia) were in cases having ether anesthesia.

A recent communication from Dr. R. M. Harbin of Rome, Ga., who has a remarkably low mortality record in these cases, says "we have operated immediately in all cases (appendicitis) after a positive diagnosis, for the reason that we have felt incapable of diagnosing the intermediate stage of Ochsner. We have tried it in years past only to fail in many cases."

We readily agree that all suitable cases should be operated on immediately and Dr. Harbin and a few others seem to have been fortunate enough to get their cases sufficiently early. However, it is just this class of cases, which come to us late, that gives the larger proportion of the mortality.

We would call your attention to tables 9 and 10. We believe these tables give the answer. Notice the cases which died of peritonitis. Eighty per cent. of these had abdominal distention; seventy-two per cent. had general rigidity; fifty-seven per cent. had an abundance of albumin in the urine; and forty-two per cent. had an abundance of casts in the urine. This group of clinical and laboratory findings spells extending general peritonitis.

We did not include statistics on diacetic and acetone in the urine and the kidney function for the reason that these have only been routine with us for a few years but a very large percentage of such cases show marked diacetic and acetone and a low kidney function.

PERITONITIS—Relation to Operative Deaths; 1605 Cases—82 Deaths
Clinical and Laboratory Findings Stated in Percentages

	Prior to Operation						
	Distention	Rigidity		Peritonitis	Albumin		Casts
		General	Right Sided		Abundant	Trace	
All Cases (1605)	16	3	50	40	26	10	8
Peritonitis—Recovered	43	15	68	100	19	31	25
Peritonitis—Died	80	72	10	100	57	2	42
Other causes of death	6	12	10	10	12	5	11

Table 9. Shows the relation of Peritonitis to Appendicitis Deaths. Abdominal Distention, General Rigidity and Albumin and Casts in the Urine are danger signals too frequently disregarded.

Peritonitis—Incidence in 1605 Cases Involving the Appendix

Some Degree of Peritonitis Recorded in 642 Cases.
Slight or Moderate Peritonitis Recorded in 479 Cases.
Spreading Peritonitis Recorded in 163 Cases.

Table 10. Shows incidence of Peritonitis in all cases of Appendicitis.

The showing in this table, we think, should be sufficiently convincing. There will always be a small percentage of unavoidable deaths in these cases as shown in the other tables.

Peritonitis is the outstanding cause of death in appendicitis and here as in many other diseases prevention by early operation is the ideal method. The laity as well as the average physician are not sufficiently impressed with the necessity of using every means of preventing peritonitis. But fifty-four (over 65%) of our eighty-two deaths were from peritonitis.

Only forty-three per cent. of the peritonitis cases which recovered were recorded as having any distention and sixty-eight per cent. had only right sided rigidity which is an expected diagnostic sign. Only nineteen per cent. had abundant albumin in the urine and only twenty-five per cent. had any casts. Of course many cases in this group had a narrow escape but they did recover. These were cases in which most of the laboratory findings and clinical signs were present, but in a moderate degree compared with those that died.

CAUSE OF DEATH

Appendix Diseases—Passavant Memorial Hospital 1923 (1916) 1931. Names as Taken from Hospital Records

	Name	No. of Cases
1.	Anaphalactic Shock	1
2.	Broncho-Pneumonia	1
3.	Cardiac Dilatation	2
4.	Exhaustion of Septicaemia	2
5.	Mesenteric Thrombosis	2
6.	Meningitis	1
7.	Myocarditis	1
8.	Obstruction of Bowels	1
9.	Paralytic Ileus	3
10.	Peritonitis	50
11.	Pneumonia	6
12.	Pulmonary Embolism	1
13.	Septicaemia	1
14.	Shock	1
15.	Spreading Peritonitis	7
16.	Toxaemia	1
17.	Unknown	1
	Total	82
	Not Operated on — (are in above list)	4

Table 11. Causes of Death in Appendicitis as recorded by the operator on his Hospital Record.

CAUSES OF DEATH

Appendix Disease—Passavant Memorial Hospital from Analysis of Hospital Records—1923 (1916) 1931

Name	No. of Cases
Acute Dilatation of Heart	3
Broncho-Pneumonia	1
Hemorrhage	1
Ileus	3
Myocarditis	2
Peritonitis	54
Pneumonia	8
Pulmonary Embolism	1
Shock	9
Total	82

Table 12. Causes of Death in Appendicitis as seen by the Author in his analysis of the Records.

Table 11 shows the causes of death as they were recorded on the Hospital Records and table 12 shows the causes of death as interpreted by this reporter, taking the whole record into consideration.

The lesson from these comparisons seems perfectly obvious and supplies data on which we can act. While at present there seems to be no standardized treatment for spreading peritonitis we believe the method we will describe would be the standard method, in cases which have been neglected until spreading peritonitis is present. It is difficult and often impossible to make a physical diagnosis of spreading peritonitis but a clinical diagnosis can be made in most cases, if all the signs and symptoms are taken into consideration. Any case of appendicitis which has a distended and rigid abdomen, albumin, casts, and diacetic and acetone in the urine and a kidney function below 35% must be recognized as one with spreading peritonitis and should not be operated on until these conditions can be improved.

Such patients are always thoroughly dehydrated and must have preoperative preparation if they are to weather the storm. In our experience a greater percentage of such cases can be saved by preoperative preparation than by operation. After the fluid balance is restored the appendix can be removed.

We follow a plan (not original with us) which brings many such cases into an operative condition. We secure intra-abdominal rest with morphine and rehydrate them with intravenous glucose and chlorides. Fluids are pushed in every way. Often vomiting interferes with the taking of fluids by mouth. The rectum is not always a satisfactory route for glucose. The intravenous glucose is given in some cases by the continuous method of Matas. We recently had a case where the intravenous glucose and chlorides were given continuously for ninety-six hours in the vein of one arm and then for eighty-eight hours in the vein of the other arm; a total of one hundred and eighty-four hours. The patient was vomiting continuously and this was the only way we could rehydrate her and restore the chloride balance. She recovered.

Such cases are the poorest possible risks for operative surgery but a goodly percentage of them can be saved by this method. In even mildly questionable risks we not only give the intravenous glucose prior to operation but we give it during the operation. Such patients are returned to bed in good condition and the glucose is repeated after the operation. We must continue to push fluids until the urine and kidney function are normal and the distention and rigidity have disappeared.

The public and the physicians should always remember that an operation within the first twenty-four hours is the ideal method of safety in appendicitis but when we have these frank peritonitis cases we should not fail to have full laboratory examination and then be guided by it as well as the obvious clinical condition.

In reviewing these records I have been struck

with two things. First, there is such haste to operate that the laboratory work is not complete. This is an error. All the laboratory work including the kidney function can be done in less than one hour—that is, while the set up for operation is being made. Second, even after the laboratory work is done its obvious indications are ignored.

We should not operate in the face of abdominal distention, general rigidity, albumin, casts and acetone and diacetic in the urine and low kidney function as was done in many of these cases. Remember that preoperative preparation and post operative support will save many of these cases and avoid the burden of mortality which the surgeons are carrying. This we think is the main lesson to be drawn from the analysis of these eighty-two deaths.

SUMMARY

The analysis of any considerable group of cases has lessons to teach if we will find them and heed them.

The obvious lessons is these cases are:

1. There is too much delay on the part of either patient, physician, or surgeon in bringing these cases to operation.

2. There are too many errors in the diagnoses of extending peritonitis.

3. Post-operative infections are still too much of a factor in our operative work.

4. Multiple operation adds to the mortality and should only be done when absolutely necessary or when the patient's condition makes it perfectly safe.

5. The judgment as to when to operate does not sufficiently correlate the clinical and laboratory findings.

6. Too many patients are operated on hastily without sufficient study.

7. Not enough attention is given to preoperative preparation in restoring the chloride balance and the fluid balance.

8. No patient who has a distended, rigid abdomen, albumin, casts and diacetic and acetone in the urine and a low kidney function should be operated on until the chloride balance and fluid balance is restored.

9. More attention must be given post-operative support in maintaining the chloride and fluid balances.

10. We should be willing to discuss in our staff-meeting all such facts frankly and freely. All surgeons should seek and give free criticism of our daily work, in the interest of the sick and to promote better work.

SURGICAL MORTALITY AND MORBIDITY AND FACTORS CONTROLLING SAME*

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The subject of surgical mortality and morbidity is of interest to the surgeon, internist, pathologist and roentgenologist. Improvement depends upon closer study and cooperation of all.

It is my experience that many surgeons who do not keep accurate records of their mortality and morbidity have a much higher mortality rate than they imagine. I believe that every surgeon should adopt a definite plan of study of his mortality and morbidity rate and that this survey should be carefully made every month, because much can be learned from such a survey and probably both surgical mortality and morbidity would be reduced to some extent if such systematic surveys were regularly made. It is, of course, obvious that different surgical clinics will have a wide range in their mortality and morbidity statistics, and this wide range will probably represent only a difference in working conditions. I think we might summarize the difference under four headings:

First, the location of the surgical clinic, which will take into consideration the difference between a large number of emergency and acute conditions, contrasted to a clinic where their cases are largely made up of ambulatory cases.

Second, the boldness of the surgeon will make a great difference, because the one who is extremely conservative, always having first in mind the definite idea of a low mortality and morbidity rate, as contrasted to the other type who does not consider this factor, but acts entirely with surgical boldness and skill.

Third, the conscientiousness of the surgeon may have some bearing on mortality and morbidity statistics.

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*Read before Section on Surgery at the Annual Meeting of Illinois State Medical Society, Springfield, May 18, 1932.

Fourth, and perhaps the most important of all these considerations, is the well organized hospital staff or group, working in cooperation to give the patient the best that organized group practice can offer.

Petren[1] of the Lund Surgical Clinic, of Lund, Sweden, reports on the mortality of the Lund Surgical Clinic for a group of cases between 1922 and 1928, covering a period of seven years. Out of one series of 3,363 cases reported, there was a mortality rate of 209, or about 6¼%. The mortality rate of their entire series is not given. Of these 3,363 cases, there were the following groups of operations:

Brain Tumor	75
Kidney Operations	266
Appendicitis Operations	2192
Operations on the Gall Tract	457
Operations for Exophthalmic Goiter	199
Prostatectomy	170

The total number of deaths in the Lund Surgical Clinic in seven years was 856. Petren has attempted to classify these cases as to the cause of death, and gives the following classification:

1. Primary disease or the lesion itself	382
2. Bad general condition	75
3. Errors in diagnosis and incorrect expectant treatment	11
4. Faulty or incomplete operations	37
5. Post-operative infection	32
6. Special Post-operative complications	81
7. Pneumonia, Pulmonary, Abscess and Bronchitis	145
8. Pulmonary Embolism and Thrombosis	78
9. Uncertain causes	15

Neuhof and Aufses[2] report statistics covering 800 deaths from New York hospitals. They attempt in their study to determine the cause of death in these cases, and list the causes of death as follows:

1. Original disease	336 or 42 %
2. Suppuration	204 " 25.5%
3. Suppuration and Systemic disease	12 " 1.5%
4. Suppuration and Pneumonia	32 " 4%
5. Pneumonia	62 " 8%
6. Pneumonia with systemic disease	28 " 3.5%
7. Miscellaneous	126 " 15.5%

The miscellaneous group contains the following number of cases:

Cardiac disease and arteriosclerosis	34
Embolism and thrombosis	25
Ileus (non-peritonitic)	23
Hemorrhage	16
Renal disease	9
Pulmonary tuberculosis	8
Duodenal fistula	4
Acute yellow atrophy of the liver	2
Pulmonary atelectasis	1
Ruptured urinary bladder*	1
Acute appendicitis*	1
Acute pancreatitis*	1
Tetanus	1

*Unassociated with original disease.

You will notice that Lund classifies his causes of death under nine headings, and Neuhof and Aufses under seven headings. These classifications show the difficulty in reaching a definite understanding as to the cause of surgical mortality and give rise again to the question of some definite standard if our statistics are to be of great value. It is evident from both series that the original disease, or extension of it, combine the largest percentage.

We might say, offhand, that we have little opportunity of combating this type of mortality, but if we will assume that perhaps a large number of these cases had reached the surgical clinic at an earlier period that this mortality rate would have been considerably lower. Their not reaching the clinic at an earlier date may have been the result of one of two things. First, that they did not consult a doctor early and second, that if they did consult the doctor early, he failed to recognize the gravity of the situation and refer them for early treatment. Third consideration is that there is nothing in these reports that gives any definite information as to the preoperative preparation of these cases to withstand surgical treatment.

You will notice in Lund's report that he classifies seventy-five deaths as a result of a bad general condition. Is it possible that the bad general condition could have been improved through preoperative management?

Pneumonia, lung abscess and bronchitis also presents one of the interesting parts in the mortality of these groups. It was present in 145 cases at the Lund Clinic and in 122 of the report by Neuhof and Aufses, making a total of 267 out of a total of 1656 deaths, or about 16% of our surgical mortality resulted from pneumonia, lung abscess and bronchitis 103 cases of embolism and thrombosis also occurred, or about 6½%. I think this should offer a definite challenge to us in the prevention of post-operative pneumonia and in the prevention of embolism and thrombosis. Graham[3] has devised a definite plan of post-operative care in which he feels that he has lowered both the occurrence of pneumonia and of embolism and thrombosis.

Post-operative infection and suppuration was the cause of death in about 14% of the cases reported in these two series. A striking contrast in the two reports is that out of the series from the Lund Surgical Clinic, they

report post-operative infection in 32 cases out of 856, and Neuhof and Aufses report a total of 204 out of a series of 800 deaths. These infections occurred in cases that were not infected at time of operation. In other words, they occurred in clean surgical cases.

As formerly stated, if we are to make a careful study of the records of our mortality cases, that study must be made with the view in mind of the possibility of reducing our mortality and also our morbidity rate. It is further obvious that such a study, if to be beneficial, must prove quite definitely errors perhaps of judgment and omission on the part of the surgeon or the surgical group. With this thought in mind for some time past I have analyzed the surgical mortality occurring in my own cases along a definite line and am quite sure that it has been extremely beneficial in the better handling of our surgical cases.

We have attempted to classify this study of our surgical records in the mortality cases, with the idea definitely in mind of ascertaining whether or not these patients have had the care that we must assume that every surgical case is entitled to and it has been made with a definite effort to determine our own shortcomings in the handling of these cases. It may at times not be pleasant to bring incriminating evidence against oneself, but it is at least educational and beneficial. We assume that every individual presenting himself or herself for surgical treatment is entitled to some very definite consideration in the handling of his or her case. Therefore, we have outlined the following plan for this study for all our records and when a patient is dismissed the record is analyzed on the following basis:

1. The history and physical examination.
2. The X-ray and laboratory examination.
3. Pre-operative treatment.
4. The choice of operation.
5. Technique of operation.
6. The choice of anesthesia.
7. The immediate and post-operative treatment.
8. The complications and whether or not those complications have been properly recorded on the patient's record and properly treated.
9. The errors of diagnosis.
10. Number of post-mortems held.
11. The causes of death.

It seems to me any patient undergoing a surgical operation is entitled to consideration of all of the facts herein noted, because lack of fulfillment of these conditions may be the contributing factor to a surgical mortality; not, of course, including postmortem examination.

The history and physical examination is extremely important because upon this depends, to a large extent, the type of laboratory examinations required. The x-ray and laboratory examinations as indicated in each case by the history and physical examination, may again be the most important factor concerned in the establishing of a diagnosis and existing complications. Laboratory work is of special value, of course, in those cases past middle life and in debilitated patients, because an accurate knowledge, particularly of blood chemistry, may be the determining factor in mortality and morbidity. The pre-operative treatment is necessarily based upon the information gained up to this time, for if we find abnormal blood chemistry, or pulmonary or cardiac findings, our pre-operative treatment must be aimed at the correction or stabilization of those conditions before operative treatment is pursued. The choice of operation, therefore, logically follows.

In those cases that are, to some extent, debilitated or handicapped, they should have the type of operation that is the simplest in technique and the simplest to perform, and in those cases where possible it may resolve itself into a two-stage operation.

The choice of anesthesia is also important and can logically be based upon the factors already ascertained, and it is my opinion that the choice of anesthesia should depend entirely upon the type of case. In other words, we should not fall into a routine of using only one form of anesthesia for all surgical patients.

The immediate and post-operative treatment follows logically and is based entirely on the preceding progress of this case and dependent further upon the complications that may occur during convalescence. In many of these cases, continuous laboratory examinations are necessary, especially in those cases where abnormal findings were found pre-operative, and in those cases where complications occur following operation.

Errors in diagnosis are not always fatal to the patient if the foregoing procedure has been adhered to, because we frequently meet a surgical abdomen in which we are not able

to establish the diagnosis definitely, and frequently this offers no ill-result in the case.

We list post-mortem examinations because we feel that after all post-mortem examinations furnish us our most valuable information. While they may be difficult to secure, well organized hospital staffs can develop this part of the work to a very high percentage.

In arriving at the causes of death we are not only interested in what the patient died from, but why the patient died from this condition. The knowledge that the patient died from pneumonia must be followed by asking, "Why did this patient contract pneumonia?" The same is true of post-operative infection. If the patient dies from a post-operative infection that is a definite thing, but we must be interested in why we have post-operative infections and what can be done to prevent such complications.

In presenting this analysis of the study of our surgical mortality of 26 cases occurring out of a total of 746 major cases in 1928 and 1929, we find the following information: That a complete history and physical examination occurred in 24 out of 26 cases, or approximately 93%. That means that at least two of our cases did not have the proper history and physical examination and, therefore, that may have contributed to some lack of proper pre-operative treatment, proper laboratory work, proper choice of operation and proper choice of anesthesia.

We find in regard to x-ray work and laboratory examinations that 23 out of 26, or 89%, received what we thought and think to be complete work in regard to their cases. This leaves three in our mortality group who did not have what we now consider they should have had in laboratory examinations.

Our pre-operative treatment seemed satisfactory in 22 out of 26 cases, or about 85%.

Choice of operation, we felt, was correct in 24 out of 26 cases, or 93%. The two cases in which we feel that the choice of operation were not correct are as follows:

1. Hypothyroidism, associated with substernal goiter, showing a slight deviation of the trachea. A sub-total thyroidectomy was performed on this patient. Patient developed a trachea collapse, necessitating tracheotomy which was followed by pneumonia. We feel in this case that if one lobe had been removed and allowed the trachea to stablize itself, and then removed the other lobe at a later date, we probably would have avoided this mortality.

The second case was that of a localized appendiceal abscess in which the appendix was removed, followed by general peritonitis. Probably if we had been content to drain this might have been avoided, although it has been our custom to remove the appendix in these cases where the appendix was easily accessible.

The technique of operation we felt was correct in 24 out of 26 cases, or 93%. The two cases in which we felt that the technique was faulty is as follows:

1. Case of post-operative hemorrhage, following appendectomy and cholecystecomy. The cystic artery in this case was isolated and ligated. The patient was extremely thin and the operation was not at all difficult. Ten hours following operation hemorrhage occurred. The abdomen was opened, the ligature had come off the cystic artery. It was again ligated, transfusion was immediately restored to and the patient seemed to be out of shock and danger, but following a twenty-four hour period the patient developed an acute dilatation of the stomach which was treated by gastric lavage and subcutaneous and intravenous salt solution and glucose for a period of five days, when the patient expired. This hemorrhage was undoubtedly the result of a poorly tied ligature on the cystic artery and can only remind us of the great care that must be used in ligating arteries. While this is the only case of post-operative hemorrhage I have encountered in fifteen years, it must serve its lesson.

2. The second case was a large fibroid uterus with a bilateral salpingitis of long standing in which the pelvis was frozen. In this spread of adhesions the bowel was ruptured and peritonitis followed. I think perhaps that choice of anesthesia might have averted this condition and perhaps spinal anesthesia, with complete relaxation, should have been indicated here.

The immediate and post-operative treatment was satisfactory in our review in 22 out of 26 cases, or 85%, leaving four cases in which we feel that the post-operative treatment was not complete. Two of these cases were cases in which dilatation of the stomach followed operation, which was treated by continuous lavage, intravenous and subcutaneous fluids, but it is barely possible that if a blood chloride had been established we might have found an alkalosis instead of an acidosis condition present, which would have respond-

ed to sodium chloride. At least, we have had two cases of similar nature since these two deaths occurred.

The second case is one in which we have listed the cause of death as unknown. The operation was a hysterectomy for fibroid uterus. The patient was in the hospital several days before the operation and complete examinations were made which we feel were, in every way, entirely satisfactory and we did not consider this case anything but a first-class surgical risk. Ten hours following operation she developed a tachycardia with no other symptoms. This tachycardia increased the pulse, reaching 160 per minute. Intravenous fluids were given and large doses of digitalis. We felt, for some unknown reason, that we might be dealing with a mild cardiac collapse. Post-mortem examination showed the heart to be perfectly normal, lungs perfectly normal, and kidneys perfectly normal. In fact, we could not ascertain any cause for death by post-mortem. It is my impression, at the present time, that this patient was suffering from a low venous pressure and that tachycardia was the result of this and not of myocardial degeneration, and perhaps if this case had received large doses of strychnine and inhalations of carbon dioxide that normal venous pressure might have been restored and saved another mortality.

The third case was in a gun-shot wound into the knee joint, completely shattering the the knee joint with a severance of the popliteal artery. This patient was transported thirty miles to the hospital and was in a stage of extreme collapse and shock when admitted. The leg was not amputated in this case, due to the extreme shock the patient was in. The popliteal artery, however, was cut down upon and ligated above the point of hemorrhage. Among several members of the family we were not able to find a donor suitable for blood transfusion in this case and it so happened that among the donors we had listed we were not able to locate one until very late in the evening; this accident having occurred on Sunday when most of our known donors could not be reached. Acacia and sodium was used as a substitute for transfusion but the patient expired. I mention this because it points out the fact that every well organized hospital should constantly have donors available in every group for such emergencies. While these emergencies arise very rarely, when they do we are almost helpless without immediate transfusion.

Under the heading of "Complications Recorded and Properly Treated" we believe that very frequently complications are recognized and properly treated, but are not properly recorded on the records. In some cases we find at post that we have not recognized complications and, therefore, they have not been properly treated. If our records do not show complete progress notes and complete data as to date and hour of beginning complications, we do not feel that the patient has had the best post-operative care that was possible.

Causes of death in these 26 cases are as follows:

CAUSES OF DEATH

CAUSES OF DEATH	NO.	PER CENT.
Primary disease or Extension	11	42 %
Pneumonia	2	7½ %
Faulty Technique	1	3¾ %
Choice of Operation	2	7½ %
Post-Operative Hemorrhage	1	3¾ %
Pulmonary Embolism	1	3¾ %
Cause Unknown	1	3¾ %
Bad General Condition, Question of Operation	5	19 %
Cardiac Failure	2	7½ %

The mortality in this group of cases is about 3.5%. In a recent analysis covering a total of 1215 operations, our mortality was 5.5%. Included in this group were 13 cases of carcinoma, which died following operation. If we remove these 13 cases, we have a mortality for this group of 4.5%. It is my impression that advanced carcinoma is one of the chief causes for a high mortality rate and I believe this group of cases falls into a classification where we attempt to accomplish some good, knowing that the odds are frequently against us and as long as we so advise the patient, or the immediate relatives of the patient of these facts, we cannot be criticized for mortality in this group. It is possible that the mortality occurring in this group could be markedly reduced if these patients could be brought to us in the early development of the disease, but inasmuch as a large number present themselves as almost a last resort, mortality will remain high under those conditions.

Morbidity is nearly always dependent on the time and choice or election of operation and technique. In thyroid surgery the time of operation that is, before permanent cardiac damage has occurred, will certainly influence our morbidity and the extent or amount of thyroid removed will probably determine whether we have a hypo or hyper following operation, or are fortunate enough to have removed the exact proper amount of thyroid tissue. It has seemed to me that since we are adopting the plan of removing almost all of the thyroid gland that we are seeing far too many cases of hypothyroidism following thyroidectomy and it has been my experience that we are seeing more cases of hypoparathyroidism due to injury in the removal or destruction of the blood supply to the parathyroids.

In gall bladder disease morbidity may also be determined by the time of the operation and a choice of cholecystectomy or cholecystotomy and the exploration of the common duct for gall stones. Our own experience is that cholecystectomy gives us a much better result than cholecystotomy. We have not been able to determine much difference in the relief of symptoms as related to the duration of the disease from the history obtained. If chronic hepatitis and chronic myocarditis result from long continued infection of the biliary tract, then earlier operation will prevent a portion of our present morbidity.

Technique plays an important part in post-operation morbidity, particularly in the amount of trauma produced in surgery, which frequently results in undue adhesions and the lack of care in peritonealizing raw surfaces. Lack of proper care in the closure of abdominal wounds frequently results in post-operative hernia, which frequently is fully as serious as the preexisting condition.

Mortality and morbidity will be further reduced if we always bear in mind that each case is an individual and that individuals cannot be standardized, but all require special and complete study. While general routine in hospital surgery practice is necessary, it should not give way to the individualization of each case.

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DISCUSSION ON PAPERS OF DRS. PACKARD AND BLACK

Dr. Jabez N. Jackson, Kansas City, Mo.: I think these figures speak for themselves. We are coming down to the point where we are not discussing generalities but our results. These analyses are worth while. I think they also illustrate what I said in my paper that we must take into consideration the physiologic balance of the patient we are operating upon. I think very much can be accomplished by the post-operative care of the patient. If the average intern would carry a stomach tube around his neck and lavage the stomach oftener, we would have fewer deaths. So many men wait on gastric lavage until the patient reaches the stage where nothing can be done. I tell my nurses that there are two types of so-called gastric dilatation, one in which antiperistalsis is still there but peristalsis is gone, and the other where antiperistalsis and peristalsis are both gone, the patient is all blown up and finally dies. I say to the nurse, to always watch the epigastrium and the lower border of the ribs, because sometimes you will find it if you percuss over the ribs. If six hours after operation the patient has either nausea or distention, the stomach should be washed out and we wash it out every three hours until these indications are gone. If you wait twenty-four hours, the patient is blown up, you have a paresis and it will not do any good to wash out the stomach. In many of these cases we can anticipate. In chronic gall bladder cases I give orders for the stomach to be washed out every three hours for the first twelve hours whether there is any dilatation or not; in other words, anticipate these things that increase the mortality.

Dr. John J. Gill, Chicago: The thing I have in mind is on the very limited subject of Cesarean section. I have just been looking over the statistics of one of our general hospitals in Chicago and during the ten years from January, 1922, to January, 1932, 85 Cesarean sections were done with the death of only one mother. She died on the tenth day of pneumonia.

The operations were done by twenty-three different operators. One operator did 18, one 16, one 15, one 8, one 5, one 3, three 2, the other fourteen operators, one each. When Cesarean sections are done by a large number of operators with such excellent results in general hospitals it seems to contradict largely the statistics of the article which appeared in the March, 1932, *Ladies Home Journal* that all women to have babies should go to a strictly lying-in hospital. I hope all physicians will consider that article as detrimental to the medical profession.

Dr. George deTarnowsky, Chicago: Napoleon once said it was a good thing to wash your dirty linen in the family. There is another saying as far as a medical meeting is concerned, that it is a good place to wash your surgical failures in. I think papers like those

of Dr. Packard and Dr. Black should be read at every state meeting. It is only by analyzing work done in the early years, in the formative years and later years that we can pass on something to the succeeding generation. Dr. Black's paper is the one I am particularly interested in because he analyzes facts in cold blood, because he blames himself where blame is due and he blames his colleagues where blame is due them. He is giving a lesson for the future.

I was rather surprised that he reported 54 deaths from peritonitis. I imagine that those 54 cases were done quite a number of years ago when it was a common thing to open the abdomen in the midline, do a ventral suspension, remove a few ovarian cysts, take out the appendix, in other words, a multiplicity of operations. We are getting away from that. We are trying to make the correct diagnoses and to limit our surgery to the actual pathology present.

As regards the reduction of morbidity and mortality in appendicitis I find that there are a few factors which influence them. I find that most young surgeons when they begin do not know how to ligate the meso-appendix in order to include the artery of the meso-appendix. Hardly a month goes by in the Cook County Hospital but some senior intern who has been given permission to do an appendectomy will tell the attending surgeon that the patient has developed a hematoma. Sometimes the patient dies; if he survives it increases the morbidity. Again we find that too much rough surgery is being done; the tissues are not being handled with gentleness. Surgeons seem to lay too much stress on the number of laparotomy pads they introduce around the pathologic site and too little stress on gentle handling. They frequently in the effort to reach the appendix tear through nature's zone of defense.

I want to stress the abuse of laparotomy pads. If it is a case of spreading peritonitis a laparotomy pad is not indicated at all. It can do absolutely no good. Peritonitis is already present. If it is localized peritonitis you have your zone of defense. If you operate inside your zone of defense your laparotomy pad becomes useless. I think the only indication for the use of one laparotomy sponge is where in removing the appendix you run the risk of perforating the appendix and letting a little drop of pus get on your zone of defense. In such a case you are justified in using one laparotomy pad.

It stands to reason that Dr. Black's mortality would be higher than that of the occasional operator. The occasional operator has made his own diagnosis, gets the patient in the hospital within twelve to twenty-four hours, removes the appendix which has no zone of defense. The regular operator gets the desperate cases with abdomen ballooned up and a well marked line of defense. Consequently his mortality is going to be higher than the occasional operator.

I think Dr. Packard's paper is extremely valuable. I think we should bring out these statistics in the different hospitals, thrash things out discuss them in state and local meetings, so the younger men will not have to go through the same mortality rate until they acquire the technic and judgment of the older surgeons.

Dr. Murphy, Dixon: After all, the most important thing in the treatment of acute appendicitis is an operation within the first twelve to twenty-four hours, preferably the former. This will reduce complications, morbidity and mortality to the minimum, and also reduce the period of hospitalization.

In the event that the patient is suffering from some other serious disease, it should receive appropriate treatment, but the operation should not be delayed when there is danger of perforation. For example: if the patient is a diabetic, glucose, insulin and salt solution may be administered in quantities adequate to combat the acidosis before and during the operation. Thereafter, it may be carried on in accordance with the indications for diabetes. Of course, ether and chloroform as a general anesthetic are contraindicated in diabetics. I have found local anesthesia, plus morphine, supplemented, if necessary, with nitrous oxide and oxygen, or ethylene and oxygen to be satisfactory.

In the advanced stage of the disease, when a large localized abscess has formed and the peritoneal cavity has not been completely walled off to the anterior wall, some barrier should be introduced down to the abscess such as gauze covered with rubber tissue or rubber dam to be left in this postion from five to seven days, preferably the latter. Then the abscess may be drained without fear of contaminating the general peritoneal cavity. An appendectomy should be done after the infection has abated, usually in about two months.

In conclusion, I am in full agreement with all Doctor Black and especially Doctor Packard said in regard to careful technique and physiologic surgery, as the patient is always a medical as well as a surgical problem.

Dr. R. K. Packard, Chicago (closing): One of the conditions we have to meet in the ordinary run of surgery is to have some one call up and say, "I am bringing in an acute appendicitis," or "I am sending in a patient with appendicitis and gallstones to be operated on tomorrow." That constitutes quite a problem on the part of the family because they may have been told that the patient will be operated on tomorrow or right away. What we have to do is to develop a diplomatic technic for postponing operation until we have had opportunity to study the case. Sometimes that requires as much knowledge as surgical ability in handling the case.

I did not attempt to go into the pre-operative management of any particular group of cases or the post-operative management. I took it for granted that we should know that, for that information is available. It is only by careful study that we can be posted on those lines. I think a good many of the errors that we make are errors of omission; they are not errors of ignorance. We know; sometimes we hurry; sometimes we rush things along unduly; sometimes we get an ego about surgery. I remember being in Dr. Crile's clinic when he had operated on 600 or 700 goiter cases without a death and then he had a death. He said, "this death is the result of my being cocky.

I thought I would have no more thyroid deaths and we operated on this patient in one stage." With the judgment he had the patient should have been operated on in two stages, so we develop a rather cocky spirit and then we have something strike us right on the head and bring us down to earth again.

Dr. C. E. Black, Jacksonville (closing the discussion): I am certainly very grateful to these men for their discussion. especially Dr. Jackson. I listed abdominal distention, abdominal rigidity, frank albumin, numerous casts and acetone and diacetic in the urine and low kidney function as the serious danger signals. I did not mean to imply that every one of these factors is present in every case, but if you have the major portion of them present in any case it is well to beware. Reduction of the water balance and chloride balance is the condition which must be overcome if these cases are to be saved for successful surgery. Back of it all is this idea, if we can induce a large number of hospitals to make such an inventory of their work over a period as I have indicated and put these together, we could find out what we are really doing. Hospitals make an audit of business accounts, why should they not make an audit of medical accounts and surgical accounts?

SOCIALIZED MEDICINE IN PRESENT-DAY AMERICA*

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NEW YORK CITY

In selecting "Socialized Medicine in Present-Day America" as the subject of my talk, I have been guided by the importance of this question to you as well as to the medical profession. You are naturally concerned in any system which would alter the quality of medical service or its cost to you. So many drastic proposals have been put forth recently for changes in our present method of administering and distributing medical care, that I thought you would be interested to know just what these changes would mean to you.

In order to avoid confusion and misunderstanding, let me say at the outset that I am not going to discuss the merits or demerits of socialism in general. I am not going to talk of state medicine under a socialized form of government. These are totally separate questions with which we are not for the present concerned. In my talk to you I shall limit myself entirely to the consequences of socialized medicine in a nation like our own. You will appreciate how little this has to do with the general question of socialism when I tell you that many of the people who are advocating state medicine for America are staunch adherents of the capitalistic system,—are, in fact, representatives of the small group that has made millions through capitalism; while the opponents of medical socialism include many who believe firmly that a new economic deal is necessary before our present troubles can be brought to an end.

Many of you may be wondering exactly what I mean when I speak of state medicine. Let me explain to you that state medicine can come to a community in one of two forms. The government may enter into the practice of medicine directly by expanding its public health service and extending the latter's activities to include the treatment of individual citizens for a variety of conditions; or it may sponsor a plan for compulsory health insurance.

In either case, in the opinion of the great majority of the physicians of the country, the result would be a lowering of the standards of medical care. You might get more service, from the viewpoint of quantity, but it would be poorer service; and we doctors feel that what the people of this country need and want is not so much more treatment as better treatment.

I do not think it necessary to discuss in detail the consequences of direct governmental participation in the practice of medicine. For one thing, this form of medical socialization has not as many advocates as compulsory health insurance. For another, its inherent evils are apparent even to people who have not made a profound study of the question. Americans are unfortunately all too familiar with the stultifying and corrupting influence of politics on most forms of public service. I am sure that very few of you would care to see this influence at work on the doctor who enters your home and deals with the most intimate and vital problems of your life.

The Seabury investigation revealed a few of the stupid and dishonest practices to which a little group of physicians were not ashamed to stoop once they became steeped in the debasing atmosphere of political experience. Believe me, politics is no fit chaperon for medicine, which, even more than Caesar's wife, must be above suspicion.

*Delivered over Station WABC on January 2, 1932.

Even if politics were not as corrupt and inefficient as they indubitably are, there are many difficulties in the way of socializing medicine under our present form of government. In no field is success more dependent upon individual talent and personal quality than in the practice of medicine; in no field are personal contact and understanding more necessary. These indispensable conditions are impossible under a bureaucracy, no matter how well administered the latter may be.

It would be far easier to socialize large, highly organized industries like the railroads, the telephone and telegraph services, the distribution of light and power, than an unorganized field like medical practice, where the work is necessarily highly individualistic. In the former case, the organization remains the same; the conditions of employment of the actual workers are the same: there is merely a transfer of ownership. In socializing medicine, you alter the basic structure of the profession, revise the status of the workers and attempt to establish bureaucratic control of a sphere of activity which is essentially dependent upon individual training, judgment and ability.

This is not merely my personal opinion. The Commission on Medical Education, headed by President Lowell of Harvard, made a study of the conditions of medical education and medical practice which extended over eight years. Upon the conclusion of its survey, it disputed the alleged advantages of group practice in the following words, "No scheme of organization or group responsibility can substitute for the priceless, discriminating and sympathetic judgment of the competent and conscientious physician." This invaluable attribute must be surrendered when practice ceases to be personal and becomes the concern of the state.

As a rule, when people speak of state medicine, they are not referring to the direct practice of medicine by doctors in the government employ but to compulsory health insurance. Under this system, all persons within specified income groups are required by law to insure themselves against sickness. The worker pays part of the premium and the balance is made up by the employer and the state. Theoretically this sounds very enlightened and liberal; but what really happens?

We need not speculate in this topic. Compulsory health insurance has been in force in England, Germany and Austria for a number of years. What is the condition of medical practice, and what are the standards of medical care, in those countries?

The answer is no argument for compulsory health insurance. In order to keep the costs of insurance within the means of the contributing parties the doctor is so poorly paid that he must see about fifty patients a day to earn the most modest livelihood. Naturally he cannot examine each patient thoroughly and administer careful treatment; and the practice of medicine becomes a matter of handing out stock prescriptions.

There is no time for postgraduate study to keep abreast of new discoveries and new ideas; and, after a few years of this stultifying grind, the doctor becomes incapable of the accurate diagnosis and well-judged treatment for which, in any case, he cannot spare the time. The enervating effect of this type of practice is evidenced by the paucity of worthwhile research which has come forth from panel physicians in Europe in the years in which compulsory health insurance has been in force.

The poor here, who apply to free dispensaries, receive far better medical care than the so-called beneficiaries of compulsory health insurance in Europe. Not only has there been no drop in the death rate in the countries that have adopted this theory; but there has actually been an increase in the number of working days lost each year because of sickness. Where, then, are the benefits claimed for this system?

Our need is not for more medical care, but for better care—and mass production is not the solution of this problem. We have seen super-organization fail in industry, where tangible, standardized products were the commodities dealt with. It is more surely doomed where the mysterious human organism is the subject. No two human beings are alike; and every illness is a separate problem, to be solved by individual observation and judgment rather than fixed rule. The human body is not a motor-car—and large-scale industrial methods will not heal its ills.

Successful healing does not depend upon efficient organization but upon the training, intelligence and interest of the individual healer. The central figure in any system of medical practice is the doctor; and he cannot discharge his duties properly under a system which deadens initiative and places a premium on quantity rather than skill. When economic stress forces a physician to see fifty or sixty patients a day, no one of those patients can receive adequate care. When bureaucracy imposes a thousand clerical restrictions upon a physician, research and intellectual curiosity do not flourish.

In order to have an adequate system of medical care, the economic, intellectual and social conditions of practice must be such as to attract a desirable type of student to the medical schools; the standard of professional education set by law and custom must be high; and the remuneration for services rendered must be sufficient to permit the physician to apply his professional knowledge fully and thoughtfully to each case, and to allow him to add to that knowledge, by post-graduate study and attendance at medical meetings, throughout his career. The conditions imposed on the doctor by compulsory health insurance are a negation of these fundamental principles.

Our society, rightly or wrongly, is so organized that the profit element is the motivating force of human conduct. You cannot expect the doctor, who must pay rent and taxes, buy food and clothing and educate his children under this system, to ignore or be insensitive to the basic forces in the community in which he lives. The physician must earn enough to repay him for his long and expensive training, to purchase the costly and elaborate equipment required for modern practice and to maintain a standard of living comparable to that of other professional groups. In medicine, as in every other field in present-day America, you get what you pay for. Good medical service is impossible when the physician's income is reduced to the point where he must sacrifice skill, judgment and initiative to the demands of mass production and political control.

Present economic conditions have given an unprecedented impetus to demagogues and theorists. Every day brings forth new panaceas for our troubles. We must not permit ourselves to be stampeded into accepting remedies that may prove worse than our present ills.

There are undoubtedly inefficiencies and inequalities in the existing method of distributing medical service but they do not require basic changes in the structure of medical practice to be remedied. Compulsory health insurance has given the working classes in Europe a poorer level of medical care than the indigent receive in America. It has worked an injustice on the medical profession that is only paralleled by its injustice to the sick and ailing to whom it offers an inadequate, inferior grade of service.

I believe that the lay public is a vitally interested party to any project for destroying the existing system of medical practice and substituting therefor a scheme that has proven its basic fallacy and weakness in the countries in which it has been tried. The doctor may suffer under compulsory health insurance; but in the last run it is the people that suffer most.

51 West 73rd Street.

SURGICAL RELIEF OF PAIN IN PERIPHERAL CIRCULATORY DISEASES OF THE FEET*

Samuel Perlow, M.D.
CHICAGO

Relief of pain is one of the major problems in the treatment of peripheral circulatory disturbances of the lower extremities. In the mild cases in which there is pain on walking only and in those in which there is slight continual pain, resting the extremities in the dependent position and the use of mild sedatives is sufficient. The pain in such cases usually disappears as the collateral circulation is improved by appropriate general and local measures.[1]

However, in cases with ulceration or gangrene of the toes more radical measures for its relief are necessary. The pain is of a severe gnawing character, constantly present, and with frequent agonizing exacerbations. It does not permit the sufferer to rest or sleep. Very few patients are willing or able to bear the pain during the months required for a sufficient

*From the Peripheral Circulatory Clinic of Michael Reese Hospital and the Department of Anatomy, Northwestern University Dental School.

collateral circulation to develop under conservative management. Narcotics are of little help. Besides exposing the patient to the danger of addiction they frequently are useless in controlling the pain in the later stages. The pain becomes so unbearable at times that some of the patients will actually beg for an amputation in order to get relief, and until recently amputation was the only recourse of the surgeon.

The present day treatment of occlusive vascular diseases of the extremities is ultra-conservative. We know that in a large proportion of cases if the pain can be controlled while conservative measures are instituted, the ulcers will heal and auto-amputation of gangrenous toes will take place and leave an otherwise intact and useful extremity.

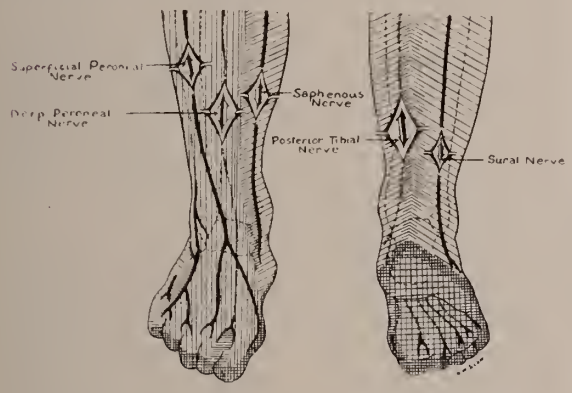


Fig. 1.—The ideal sites to incise the skin for the various nerves are shown. The solid line shows the course of the nerve in the subcutaneous tissue, the dotted line shows the course of the nerve under the fascia. The cross hatching shows the distribution of the nerves to the skin of the foot and leg.

Peripheral nerve block as a surgical means of relieving the pain was introduced first by Silbert in 1922.[2] He reported a series of four cases in which the posterior tibial nerve was injected with alcohol at the internal malleolus. Smithwick and White in 1930[3] reported a series of 11 cases in which the pain was relieved by such means. This procedure allowed the continuation of conservative treatment and effected the saving of six extremities which would have been lost otherwise.

Technic. In order to relieve the pain in such cases the painful area must be accurately outlined and the nerve or nerves that supply it with cutaneous fibres injected with alcohol. To attempt to inject the nerve with alcohol through the skin is a very dangerous procedure, because sloughing of the tissues will result. It is safer to isolate the nerve through a small skin incision. The technic of the operation is simple.[3] Under local anethesia with 1% procaine solution the nerve desired is isolated above the ankle and from ½ to 2 cc. of 95% alcohol is injected directly into the trunk. The nerve is then dropped back into place and the wound closed with fine catgut or silk. Care must be taken to protect the surrounding tissues from the alcohol. Because of the poor healing power of the tissues with which one is dealing, it is absolutely essential to isolate the nerve trunk high up above the ankle and to work through as small an incision (1″-1½″) and with as little injury to the tissues as possible. This requires a very detailed knowledge of the course of the various nerves and their relations to the surrounding tissues, especially to the adjacent blood vessels, as injury to the already inflamed artery may easily swing the course of events from cure to gangrene.

Nerves. There are five nerves which are sensory to the foot, i. e., the posterior tibial nerve which is sensory to the plantar surface of the foot and heel and to the dorsal surface of the distal phalanges; the sural nerve which is sensory to a triangular area on the lateral surface of the foot extending from the ankle towards the 5th toe; the saphenous nerve which is sensory to a similar area on the medial side of the foot; the superficial peroneal nerve which supplies the dorsum of the foot; and the deep peroneal nerve which is sensory to a triangular area between the 1st and 2nd toes.

1. *The posterior tibial* nerve is the one which it is most often necessary to inject for relief of pain. It is about ¼″ in diameter and is inclosed in a sheath along with the posterior tibial vessels. In the distal third of the leg it lies lateral to the vessels between the flexor digitorum longus and the flexor hallucis longus muscles and on the tibialis posterior muscle. It divides under the laciniate ligament into the calcaneal, and the medial and lateral plantar nerves.

The nerve trunk is isolated best 2″ to 3″ above the medial malleolus along the medial

edge of the tendo calcaneous. The tendo calcaneous and the belly of the flexor hallucis longus muscle should be retracted laterally and the tendon of the flexor digitorum longus muscle should be retracted medially. The sheath containing the nerve and the vessels will be found about 1″ deep, the vessels being medial and the nerve lateral.

2. *The sural* nerve is formed on the tendo calcaneous at the junction of the lower and middle thirds of the leg by the anastamosis of the medial sural cutaneous nerve and the anastamosing peroneal branch of the lateral sural cutaneous nerve. It passes inferiorly with the lesser saphenous vein along the lateral edge of the tendo calcaneous behind the lateral malleolus to its distribution on the lateral surface of the foot.

The nerve can be isolated through a small incision about 2″-3″ above and behind the lateral malleolus along the lateral edge of the tendo calcaneous. It lies lateral and slightly anterior to the vein.

3. *The Saphenous* nerve in the lower part of the leg, lies medial to the crest of the tibia just behind the greater saphenous vein. It passes anterior to the medial malleolus to supply a triangular area on the medial surface of the foot and heel. It can be isolated through an incision about 3″ above the medial malleolus and 1″ medial ot the crest of the tibia.

4. *The superficial peroneal* nerve, after giving off its motor fibers high up, becomes entirely sensory at the junction of the lower and middle thirds of the leg. At this point the nerve trunk lies under the deep fascia on the extensor digitorum longus muscle about 1″-1½″ lateral to the crest of the tibia. Its course is somewhat in the medial and anterior direction. Half of the nerve fibers pierce the fascia here and become the medial dorsal cutaneous nerve to the foot, which courses medially and anteriorly across the ankle to supply the skin of the medial half of the dorsum of the foot and the 1st, 2nd and part of the 3rd toes. The remaining fibers of the superficial peroneal nerve pierce the fascia somewhat lower down, about 2″ above the lateral malleolus on the anterior surface of the leg, and become the intermediate dorsal cutaneous nerve to the foot. It passes anterior to the lateral malleolus, anastamoses with the sural nerve and supplies the lateral half of the dorsum of the foot and the 3rd, the 4th, and the 5th toes.

To isolate the nerve a longitudinal incision should be made 1″ lateral to the crest of the tibia at the junction of the middle and lower thirds of the leg. The medial dorsal cutaneous nerve to the foot will be found under the superficial fascia on the deep fascia. The remaining fibers (intermediate dorsal cutaneous nerve to the foot) lie under the deep fascia and can be found very easily by incising that membrane. If it is desired to isolate the latter fibers alone, it can be done without incising the deep fascia if the incision is made lower down, about 2″ above and just anterior to the lateral malleolus.

5. *The deep peroneal* nerve is sensory to the skin between the 1st and 2nd toes. In the lower part of the leg it lies between the tibialis anterior muscle on its medial side and the extensor digitorum longus and the extensor hallucis muscles laterally. Just above the ankle the nerve lies behind the tendon of the tibialis anterior and between the tibia medially and the extensor hallucis and the extensor digitorum muscles laterally.

It is isolated best through a vertical incision 2″ above the medial malleolus along the crest of the tibia. The tendon of the tibialis anterior muscle must be raised and retracted laterally. The nerve and the vessels will be found about 1″ deep lying on the interosseous membrane close to the bone. The nerve lies anterior to the artery and vein.

CASE REPORTS

Case 1. M.L., male, aged 32 years. Thrombo-angiitis obliterans of both lower extremities with suppurating lesion under nail of the right big toe. There was severe pain in the soles of both feet which was severe enough to prevent rest and sleep. It was not relieved by the usual therapy including typhoid vaccine intravenously. Blocking both tibial nerves with 1% procaine relieved the pain in both instances and resulted in a rise in temperature of the big toe of 2°C. on the right side and 0.6°C. on the left side. Alcohol nerve blocks were performed on both posterior tibial nerves. There was complete relief of pain and anesthesia of the soles for 4 months. The rise in temperature was 3.2°C. on the right side and 2.8° C. on the left side. The suppurating lesion of the right big toe healed within 1 week after the nerve block. Conservative management was continued with typhoid vaccine with very excellent results.

Case 2. B.F., male, aged 58 years. Dry gangrene

of the left 2nd toe on an arteriselerotic basis with severe pain in the area supplied by the posterior tibial and the deep peroneal nerves. Alcohol block of both nerves was performed under local anesthesia. There was complete relief of pain and a rise in temperature of the sole of the foot of 1.8°C. A small ulcer developed at the upper edge of the wound made for the deep peroneal nerve. Auto-amputation of the gangrenous toe was taking place when the patient died of a heart condition.

Case 3. M.S., male, aged 24 years. Bilateral thrombo-angiitis obliterans. There was a large sloughing ulcer on the right foot, following an amputation of the right 5th toe, which gave the patient no rest and was so severe that he asked for an amputation of the leg. The right sural, the posterior tibial, and the superficial peroneal nerves were blocked with alcohol. The pain was relieved completely. There was a rise in temperature of 2.6°C. on the sole and 3.2°C. on the dorsum of the foot. The patient continued on conservative management and the ulcer began to heal.

Case 4. M.C., male, aged 35 years. Thrombo-angiitis obliterans with impending gangrene of the right 5th toe. The toe was cyanotic and there were two large ulcers on the 5th toe and one on the 1st. The pain was very severe. A course of typhoid vaccine, diathermy, etc., did not relieve the pain, heal the ulcers or improve the beginning gangrene. Procaine block of the posterior tibial nerve caused relief of most of the pain and a rise in temperature of the end of 5th toe of 0.6°C. Alcohol block of the post tibial and sural nerves was performed. There was immediate relief of pain. Within 24 hours the bluish discoloration of the 5th toe was almost gone. The temperature rose 2.2°C. Typhoid vaccine was continued. Within 2 weeks two of the ulcers were healed. The third ulcer, on the 5th toe, has resisted all forms of treatment and is still suppurating at the time of this writing, 4 months after nerve block. The patient has been free from pain throughout this period.

COMMENT

The immediate results of a nerve block are complete anesthesia and relief of pain in the area supplied by that particular nerve. This lasts for 3 to 6 months and permits the continuation of conservative therapy. Besides the relief of pain there is in all cases a permanent vasodilatation and a rise in the temperature of the anesthetized area which may sometimes be as high as 4°C. or more. This is due to the fact that the sympathetic nerve supply is removed from the vessels in the area. The vasodilatation and the rise in temperature vary with the degree of spasticity of the vessels and are very important factors in improving the pregangrenous states and in the healing of ulcer. In one of the cases reported (M. L.) there was healing of a long standing suppurating process of the big toe within one week after the tibial nerve was blocked.

The incisions healed by first intention in all cases but one, a case of arteriosclerotic ischemia in which a small ulcer developed at the upper edge of the wound. There are no serious complications that can result from this procedure. In no case did trophic disturbances develop after the nerve block. Slight muscle paralysis occurs only in those cases in which the deep peroneal and the posterior tibial nerves are blocked. In the case of the deep peroneal nerve, small muscles on the dorsum of the foot which are of no importance in walking are paralyzed. When the posterior tibial nerve is blocked, the small muscles on the plantar surface of the foot, which are of slight use in walking, are paralyzed. In order to prevent atrophy of disuse and flat feet in the latter cases, we have the patients wear soft leather arch supporters and have them massage the muscles daily.

In conclusion, we can state that the alcohol block of peripheral nerves is a logical and safe procedure for the relief of severe pain accompanying ulceration and gangrene of the feet. Besides relieving the pain it is an excellent therapeutic measure.

185 N. Wabash Ave.

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ABSENT TREATMENT

A bishop, one night, at an art exhibition, noticed a young man promiscuously hugging and kissing a marble bust of a woman and deriving a great deal of enjoyment out of it. The bishop approached him.

"Young man," said the clergyman, "a good Protestant wouldn't do that."

The young man continued his maneuvres.

"I'm not a Protestant," he answered.

"Well, a good Catholic wouldn't do it."

"I'm not a Catholic."

"A good Jew wouldn't do it either."

"I'm not a Jew."

"Well, then, what are you?" asked the bishop.

"I'm a Christian Scientist and I'm necking my girl in Denver."—Pennsylvania Punch Bowl.

TREATMENT OF GENERAL PARESIS BY TYPHOID VACCINE AND THE ELECTRIC CABINET*

EMIL T. HOVERSON, M.A., M.D.
G. W. MORROW, M.D.
AND
R. O. HAWTHORNE, M.D.
KANKAKEE, ILL.

A. TREATMENT BY TYPHOID VACCINE

The use of typhoid vaccine in the treatment of general paresis was first reported by Kunde, Hale and Gerty[1] in a preliminary report. Their[2] subsequent report showed that of 49 patients so treated, 21 were restored to their former social standing or previous occupation. MacKenzie[3] reported favorably on this method. Paul O'Leary[4] in publishing the results of this form of therapy in 26 cases of neurosyphilis stated that remissions appeared more slowly than when malaria was used. Schelm[5] reported that 5 of 20 patients treated by this method were social recoveries.

The use of typhoid vaccine and arsenicals in the treatment of general paresis was adopted at the Kankakee State Hospital in April, 1929, and is still the chief form of therapy.

During the period from April, 1929, to July, 1932, 124 male patients received a total of 4198 injections of typhoid vaccine. Arsenicals and mercurials followed. The records of these pa-

Form B

KANKAKEE STATE HOSPITAL
NURSING RECORD

Name of Patient:..... ..Ward:....A350...

Date:..10-18-32..... Physician:..Dr. Hoverson..... Day of Disease.....

Time of Day	Pulse	Temp.	Resp.	Medicine	Nourishment	Remarks
8:45	76	99²	18	Cabinet Treatment	Current on full	
9:15	82	99	20			Cooperative
9:45	88	100⁸	20		Water	Ad lib
10:00	88	101⁶	20			
10:15	88	102²	20			
10:30	84	104⁶	20	Current off ½		
10:45	88	104⁶	22			
11:00	90	104⁴	22			
11:15	96	104⁴	22			
11:30	100	104⁶	20			
11:45	96	105²	20	Current off entirely		
12:00	100	106²	24			
12:15	102	106⁴	28			
12:30	100	106⁴	24			
12:45	100	106⁶	22			
1:00	104	106⁴	20			
1:15	106	106⁴	22			
1:30	108	106⁴	22			
1:45	116	106²	24			
2:00	112	105⁸	22			
2:15	108	105⁴	20			
2:30	104	105²	20			
2:45	104	104⁸	20	Cabinet removed		
3:00	100	104	20			
3:30	96	103²	18			
4:00	86	102⁶	18			
4:30	80	101	18			
5:00	80	99⁶	18			

* From the Kankakee State Hospital.

tients have been studied to ascertain what effects were produced, and hence, the value of this form of treatment. The conclusions are summarized briefly in this report.

Injections were first given every other day but after a few months the vaccine was administered through two injections per week. The reason for this change was that patients lost considerable weight. From April, 1929, to January, 1932, a course of treatment consisted of 18 injections; from January to July, 1932, a course consisted of 16 injections. The completion of each course of typhoid treatment was followed first by eight weekly injections of neosalvarsan, and this in turn by eight weekly injections of some mercurial compound.

All patients received an initial injection of fifty million killed typhoid bacilli. Subsequent doses were always increased, even when no satisfactory temperature response was obtained. Dosages as high as 27 billion killed typhoid bacilli were given. After September, 1931, the maximum dosage of 2.5 billion killed typhoid bacilli was deemed sufficient for best results; since March, 1932, the maximum dosage of 2.5 billion has not been given; it was found if two billion failed to produce satisfactory temperature response, that the desired temperature could frequently be obtained by reverting to the original dose of 50 million, and then again gradually increasing the dosage. In some cases it was never necessary to give a larger dose than 50 million for all 16 injections. Other patients alternated between 50 million and 100 million as the dosage.

In all cases it was desired to raise the temperature to a point between 103.5 degrees and 105 degrees, and to maintain this temperature several hours. To this end all patients were covered with woolen blankets and the temperature could thus be maintained above 103.5 degrees for three hours in most instances.

With some patients it was never possible to produce a satisfactory temperature response. In these cases the treatments were discontinued. In all cases treatments were continued until no further improvements were noted or until definite contraindications appeared.

Results of the Treatments: For the purpose of tabulating the results, the 124 male patients were grouped as follows:

Class 1. Deceased: The patients who died in the course of the disease.

Class 2. Escaped: The patients who escaped and maintaining themselves at large have not been returned to the Institution. Probably in good condition.

Class 3. Improved: Patients who showed consistent improvement are considered in this class. Improvement is judged by the changes, mental and physical, which have occurred. Many of these patients were restless, disturbed, and uncooperative before treatment but became quiet and more cooperative, and are now all employed at some form of occupational therapy, or as ward workers. They are considered good and reliable patients, but in the main not fit for socialization.

Class 4. Progress checked: Patients who showed no improvement, but, on the other hand, whose condition became stationary, namely, no worse.

Class 5. Deteriorated: Those who showed gradual mental and physical deterioration in spite of the treatment.

Class 6. Discontinued patients: Those on whom treatments were discontinued upon the request of relatives, or because of no response to treatment. (Permission was obtained in all cases for treatment from relatives or guardians.)

Class 7. Discharged: Patients first paroled in remission, and later discharged from the institution fit for society and industry.

The 124 male patients with whom this summary is concerned are further divided into groups according to the number of typhoid vaccine injections received.

Group 1. Patients who received no more than 18 injections. The 58 patients were given a total of 797 treatments. The records show the following:

1. Deceased	22	38%
2. Escaped	5	8
3. Improved	10	17.5
4. Progress checked	3	5
5. Deteriorated	1	1.5
6. Discontinued	6	10
7. Discharged	11	20
	58	100

Group 2. Includes patients who, not improving in satisfactory manner under 18 treatments, received more than 18 and less than 37 injections. The 23 patients in this group received a

total of 756 injections. The records show the following:

1. Deceased	3	12%
2. Escaped	1	4
3. Improved	10	48
4. Progress checked	4	16
5. Deteriorated	4	16
6. Discontinued	1	4
7. Discharged	0	0
	23	100

Group 3. Patients who, not improving satisfactorily as yet, received more than 36 and less than 55 injections. These 24 patients received 1176 injections. The records show the following:

1. Deceased	4	17%
2. Escaped	0	0
3. Improved	12	50
4. Progress checked	5	20
5. Deteriorated	0	0
6. Discontinued	1	4
7. Discharged	2	9
	124	100.

Group 4. Patients who for the same reason received more than 54 and less than 73 injections. The eleven patients here received a total of 774 injections. The results are as follows:

1. Deceased	1	10%
2. Escaped	0	0
3. Improved	7	63
4. Progress checked	0	0
5. Deteriorated	1	9
6. Discontinued	1	9
7. Discharged	1	9
	11	100

Group 5. Patients who received more than 72 and less than 91 injections of vaccine. The 8 patients in this group received 695 injections. The records show the following:

1. Deceased	0	0%
2. Escaped	0	0
3. Improved	4	50
4. Progress checked	4	50
5. Deteriorated	0	0
6. Discontinued	0	0
7. Discharged	0	0
	8	100

In the following table the results are summarized regardless of the number of typhoid injections given, and includes the three year period.

1. Deceased	30	24.19%
2. Escaped	6	4.83
3. Improved	43	34.67
4. Progress checked	16	12.91
5. Deteriorated	6	4.83
6. Discontinued	9	7.29
7. Discharged	14	11.29
	124	100.

Of the fourteen patients who improved sufficiently to be paroled, and later discharged, eleven are now self-supporting and useful members of society. We have been unable to locate the remaining three who were discharged, but as a matter of fact they are evidently well enough to be at large.

The Laboratory findings were as follows:

1. In all there was decrease of cell counts in the cerebrospinal fluid.

2. There was no appreciable effect on the Lange Gold Curve.

3. In only two patients was the Wassermann reaction of the cerebrospinal fluid changed from four plus to negative. In only one case was the four plus spinal fluid Wassermann reaction changed to one plus. In the other there was no change. The general findings here are about those reported for other forms of successful treatment.

Conclusions

1. 124 male patients suffering from general paresis were treated with injections of typhoid vaccine combined with arsenicals during the period April, 1929, to July, 1932.

2. 11.29% (14) of the patients treated showed sufficient mental improvement to permit discharge. 5% (6) more ran away and were in condition to live and maintain themselves at large.

3. 13% (16) had the disease checked in its progress and the cases became stationary.

4. 24.19 (30) uninfluenced by treatment died in the natural course of the progressive disease.

5. The most marked mental improvement (9%) occurred on the completion of the first typhoid course. 2.25% (3) later.

6. This survey has demonstrated that typhoid vaccine plus arsenical therapy is of definite value in the treatment of Dementia Paralytica.

7. The results compare favorably with those obtained by other forms of treatment.

8. Other authors report results as good as these when no arsenicals or mercurials were employed in the treatments. We must assert therefore that the vaccine production of fever is the active curative factor in our group.

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B. TREATMENT WITH THE ELECTRIC CABINET

(A Preliminary Report)

It is well known that hyperpyrexia often

produces beneficial results in the treatment of general paresis. The methods by which this hyperpyrexia may be produced are many. A review of the various methods has been made by Neynamm.[1] In 1919 Weichbroat and Jahnel[2] showed that rabbits infected with syphilitic scrotal chancres got well more readily when they were placed in a heated chamber. In 1930 Kahler and Knollmeyer[3] produced hyperpyrexia by subjecting patients afflicted with general paresis to an incandescent lamp bath from one to two hours. They reported marked clinical improvement. Although there are many reports in the literature, as yet we have been unable to find any article describing our method of treatment.

At the Kankakee State Hospital it was desired to produce a high temperature and to maintain such a temperature for a long time with two main considerations. The first consideration was the ease with which the treatment might be conducted compatible with the patient's comfort, and the second consideration was that of financial expenditure.

The use of an electric cabinet furnishing the source of external heat seemed to be the answer to both points. Accordingly experiments were conducted which resulted in the adoption of a specially constructed electric cabinet. This cabinet was fabricated and constructed in the Sheet Metal Department of the Kankakee State Hospital at a cost of about $35.00.

The cabinet is constructed of 24 gauge galvanized iron. The outside dimensions of the cabinet are: length, 60 inches, width, 28 inches, and the center height is 26 inches. The center inside height is 24 inches, and the sides are vertical for a height of 14 inches, and then curved gradually to the center. One end of the cabinet is closed by a galvanized iron end section "double-sealed" to the main body of the cabinet. This provides additional construction strength and also aids in conserving the heat generated. The other end of the cabinet is open and has ¼ inch rod rolled into the outside of the cabinet. This is to provide the proper stiffness to maintain the proper shape to the cabinet. This end is so arranged that the blanket draped around the neck of the patient may be fastened, by means of clamps, attached to this curved rod.

For the sake of smoothness and strength the bottoms of the sides and end are rolled inwards in a one inch roll. Inside of the frame are three grooved wooden ribs which follow the curve of the cabinet. The end ribs are placed 10.5 inches from the ends of the cabinet, and the center rib is 19.5 inches from each end rib. Wires insulated by asbestos are placed in the grooved ribs and lead to the electric sockets which are located on the sides of each rib. Four such sockets occur on each side of the ribs, giving a total of eight lights per rib and a total of 24 lights. The electric wires are led into each rib through a 1-inch opening located at the top of each rib. Each of the holes has a metal fitting. The lights are placed in a series of 12 lights each, which permits the use of a greater amount of heat in producing the desired temperature, and of a lesser amount of heat, to maintain a given temperature with comfort to the patient. The current used is a 220 D. C. The bulbs are each of 30 Watts. The bulbs are shielded by a heavy wire netting attached to the frame and wooden rib. The lights are controlled by two switches on the outside of the cabinet, one for each series of lights.

A cabinet so constructed can be placed in



Fig. 1. Cabinet in position.

an ordinary hospital bed. Figure 1 shows the cabinet in position on the bed.

The bed is prepared by first placing a rubber sheet on the mattress, and over this is laid a cotton sheet. The patient unclothed and covered with a cotton sheet is placed on the bed. The cabinet is put in position over him and a blanket is draped over the open end around the patient's neck. Then several thicknesses of woolen blankets are laid over the cabinet.



Fig. 2. Patient in cabinet.

Figure 2 shows the patient ready for treatment. The 24 lights are now turned on. Axillary temperatures are taken every 15 minutes. If any thermometer reading seems questionable a rectal temperature is taken. The 24 lights remain burning until the patient's temperature has reached 104 degrees. Then only 12 lights are used until a temperature of 105 degrees has been reached. All the lights are then turned off. A temperature of 103.5 degrees is usually obtained in two hours. The patient's temperature usually rises to 106 degrees and remains at this level for about one hour. (This is true only in the case of cooperative patients.)

When the temperature begins to drop from 104.5 degrees, 12 lights are turned on and kept on until the temperature again starts to rise. This procedure may be repeated many times. Our procedure has been to keep the temperature over 105 degrees and under 106 degrees for three to five hours. Figure 3 shows the treatment in progress.

At first the patients were placed unclothed in the cabinet, without a sheet between them and the lights. In these cases a loss of weight



Fig. 3. Treatment in progress.

of five pounds was not uncommon. When a sheet was placed over the patient, the usual loss of weight was about one pound. The loss of weight was regained the following day. In all cases, the patient was urged to drink water. Sometimes as much as six liters was consumed. The average of about three liters was consumed as a rule.

At first, temperatures of 104 to 105 degrees were obtained, but no attempt was made to maintain this temperature for any length of time. As no ill effects were noted, the higher temperatures were maintained for longer periods of time. As the work progressed it was found possible to maintain a high temperature

for over five hours with no ill effects to the patient.

At the completion of each treatment, the temperature was allowed to gradually fall. When it reached 102 degrees the patient was removed from the cabinet and placed in a dry bed.

A treatment given on October 18, 1932, gave the following temperature curve:

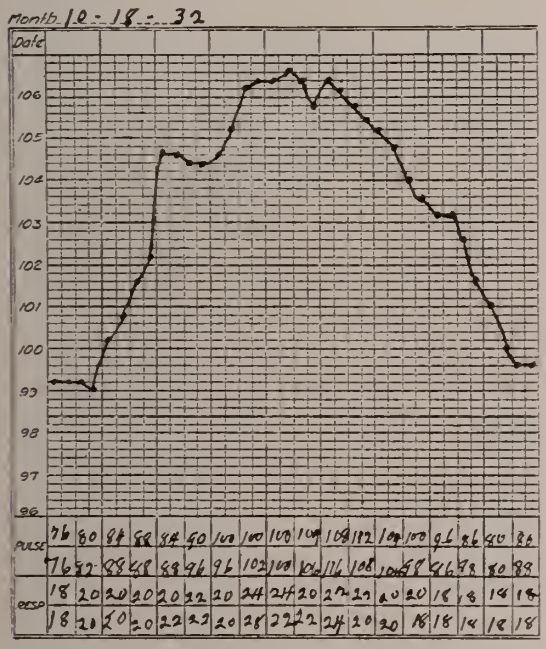


Fig. 4. Temperature chart.

The patients who had been treated by this method are all males, between the ages of twenty-nine and fifty-four. Thirty-two patients, representing all the different body types, have received a total of 109 treatments. Some have been given as many as eight while others have received only one treatment. In the short time that this method of treatment has been used definite beneficial effects have been noted. As yet no patient has improved sufficiently to warrant his discharge.

The following table shows the number of treatments given each patient and the patient's response. The patients are divided into three groups.

Group One: Marked improvement—gain in weight — clean — co-operative—more mentally alert—work well without close supervision.

Group Two: Improved in that they are now more cooperative, cleaner and help in the ward work under supervision.

Group Three: No improvement.

The following table shows the number of treatments given to each patient in each group.

Group One:

Case number.	No. of treatments.	Result.
1	5	Marked improvement
2	3	" "
3	5	" "
4	6	" "
5	5	" "
6	8	" "
7	3	" "
8	2	" "
9	4	" "
10	7	" "
11	2	" "

The average number of treatments given per patient in this group is 4.5.

Group Two:

Case number.	No. of treatments.	Result
12	5	Improved
13	3	"
14	4	"
15	4	"
16	2	"
17	2	"
18	3	"
19	2	"
20	2	"
21	6	"
22	3	"
23	1	"

The average number of treatments given per patient in this group is 3.0.

Group Three:

Case number.	No. of treatments.	Result.
24	3	No improvement
25	4	" "
26	4	" "
27	3	" "
28	1	" "
29	2	" "
30	3	" "
31	1	" "
32	1	" "

The average number of treatments given per patient in this group is 2.4.

Since the average is about equal to the mean, the average is used in this preliminary report. The averages show a close correlation between the number of treatments, or the number of hours that a high temperature was maintained, and the clinical results.

CONCLUSIONS

1. The electric cabinet offers a safe and efficient means of maintaining a hyperpyrexia.

2. There is a close correlation between the number of hours that a high temperature is maintained and the clinical results obtained.

3. In due time a further report will be made.

4. The treatment as described is carried out without subjecting the patient to any

real high external heat. The highest temperature recorded in the cabinet itself (in the center, and about four inches above the patient) was 126 degrees F. In the course of the usual treatment the temperature of the air about the patient ranges from 120 degrees to 126 degrees Fahrenheit.

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THE USE OF CONVALESCENT SERUM FOR THE PREVENTION AND ATTENUATION OF MEASLES*

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A center for the preparation and distribution of human convalescent serum for infantile paralysis was established at Chicago in 1930. Since this disease is a seasonal one and the collection and preparation of convalescent poliomyelitis serum occupies only several months of the year, the rest of the time was utilized for the preparing of other human convalescent serums that are considered effective either in prophylaxis or in therapy. This addition to the functions of the poliomyelitis serum center did not interfere with the efficiency of the organization because the contagious diseases for which serum was prepared do not coincide in their seasonal occurrence with that of anterior poliomyelitis.

It has been found relatively difficult to obtain donors for convalescent measles serum. Every available means was used to secure these donors, a ready source being the convalescing patients at the Municipal Contagious and Cook County Contagious Hospitals, the authorities of these institutions cooperating with us to the fullest extent. The blood collected at these institutions, however, was inadequate to supply the need.

The Chicago Board of Health generously placed at our disposal their daily records of measles cases, reported and confirmed. After the isolation period had ended, letters were sent to the adult patients, and these letters were followed by telephone calls. Both letter and call explained our purpose, and emphasized the need and usefulness of convalescent measles serum. Most of the measles serum was obtained in this way, although this caused a delay between defervescence and the collection of blood, and in many instances the blood was not drawn until a month or more had elapsed. Occasionally individuals furnished blood a second time, within three weeks, and since a maximum of only 250 cc. was taken, we felt this was a safe procedure when the hemoglobin and blood count were normal. This was done only when the supply had been greatly depleted and demands for serum were frequent and urgent. Fifty per cent. of the blood we obtained was drawn during convalescence, but the remainder was obtained at a later period. The samples of serum were pooled so that the potency of the fresh convalescent serum would not be greatly diminished by dilution with the serum from the older cases.

The control of epidemics of measles has been a subject of great interest and effort with disappointing results. Sanitary measures employed in other epidemic diseases have been almost futile when applied in measles.

The isolation of organisms claimed to be the etiologic agents of the disease has been reported [1 and 2] and also the preparation and use of sheep serum[3] and an antitoxin[4] for prophylaxis. Some observers, however, consider these animal serums of questionable value, and their efficacy still to be proved. Another sheep serum prepared from the virus of measles[6] has also had but indifferent success and the danger of a serum reaction[5] is an undesirable feature.

Since the first publication[7] on the use of human convalescent serum in measles prophylaxis, there have been numerous reports in the literature upon the effectiveness of this method in either preventing or modifying the disease. With only a rare dissenting report,[8] there has accumulated a mass of literature affirming the successful prophylactic use of measles convalescent serum.[9] There is considerable variation in the success of complete protection obtained, a variation from 48% to 97%. However, when the instances of attenua-

*From the Samuel Deutsch Convalescent Serum Center of the Michael Reese Hospital, Chicago.

tion of measles are included in the favorable results, there is a consistent uniformity of success in over 90% of cases.

Despite some adverse opinion,[10] many favorable reports[11] have also appeared on the use of normal adult serum and of whole blood as an effective and readily accessible substitute for convalescent serum to be used for the prevention of measles. The number, both of completely protected and modified cases, is distinctly lower than for individuals given serum from recent convalescents. Pooled normal adult serum seems to be more potent than whole blood. The adult serum seems relatively effective for prophylaxis in doses of 20-40 cc. and the whole blood in doses of 40-80 cc.

After a careful analysis of the literature, it became obvious that certain principles had been established regarding convalescent serum prophylaxis of measles. These principles of prophylaxis, clearly presented by A. C. Silverman,[12] are briefly as follows: 1. If possible, convalescent serum should be collected between 7-10 days after defervescence. 2. To obtain complete protection from the incubating infection (but only temporary immunity from subsequent exposures) the serum should be given within 5 days after exposure. 3. If given during the interval between 6th and 9th days after exposure, the serum will most likely cause a modification of the measles, such an attack, even though modified, being followed by an active and probably lasting immunity. 4. Nine days or longer after exposure there is little likelihood that the serum, except possibly in enormous doses, will have any influence on the course of the disease. 5. No less than 3 cc. of serum should be given to a child 3 years or less, with addition of 0.5 cc. for each additional 6 months of age. 6. Although such dosage should prove adequate, other factors must be considered which might necessitate the use of more serum. These factors are intimate and continuous contact, weight of the patient, and physical condition. A debilitated child, or a child suffering from some other infection should receive a larger dose, for, in all probability the patient's resistance is lowered. 7. Pooled convalescent serum should be used, because serum from individual patients may contain a low titer of immune bodies. 8. The dosage should be increased if the serum has not been used within 9 months of preparation for there is diminution in the potency after this period. 9. Because of the great incidence of complications with the resultant high mortality in infants, all children under 3 years of age should be given serum early enough to cause complete protection or modification. Older children, who are sick or in poor physical condition should receive serum early for the same reason. 10. It is advisable, in healthy children, to allow the development of an attenuated form of measles with its accompanying active immunity rather than produce complete protection. However, in a small percentage of cases, the serum fails to cause any modification, especially when given in the 6-9 day post-exposure period. Because of this percentage of failure, serum should be administered early and in adequate amounts to sick or debilitated children and infants to confer complete protection, and the modified disease with its subsequent active immunization allowed to develop should the child be exposed at a later and more favorable period.

There has been no general notification of the availability of the serum to physicians by the Samuel Deutsch Serum Center because of the limited supply. The hospitals were acquainted with the source of serum and during the season various institutions called upon the Center for convalescent serum. The remainder was distributed to physicians who made requests for use in private patients. They usually phoned the Serum Center, and the amount of serum and the optimum time for injection were discussed. Usually, a member of the family obtained the serum and the private physician administered it in the home. The policy established at the Serum Center was distribution depending on supply. When there was sufficient serum on hand, all requests were granted. However, when the supply was diminished, distribution of convalescent serum was limited to children under 3 years of age and over 6 months (unless the mother gave no history of measles) and to children, sick or in poor physical condition. The remainder were supplied with pooled adult normal serum, or whole parental blood was advised. The serum was prepared in 5 and 7.5 cc. doses, using 5 cc. as a mini-

mum dose, and 7.5 cc. when condition or age of the patient required a larger dose. Pooled adult serum was supplied in doses of 20 cc. When serum was distributed to hospital contacts, follow up letters were sent after a suitable interval to determine the results. The serum used in private cases was followed by a questionnaire card mailed to the physicians who had employed the serum.

During the year of 1931 and the first half

CHART 1. SUMMARY OF CASES IMMUNIZED WITH MEASLES CONVALESCENT SERUM

Day after Contact of Serum Administration	No Disease				Modified Measles				Moderate Measles*			Severe Measles*		
	0-3 yrs.	3-10 yrs.	10+ yrs.	Age?	0-3 yrs.	3-10 yrs.	10+ yrs.	Age?	0-3 yrs.	3-10 yrs.	10+ yrs.	0-3 yrs.	3-10 yrs.	10+ yrs.
1	15	2			3	1								
2	20	4	1		7	4				4 yrs. 5 cc. 14 days			5 yrs. 2.5 cc. 7 days	
3	22	23	2		7	2			3 yrs. 5 cc. 18 days			8 mos. 5 cc. 15 days		
4	20	16	1	1	12	12	1		3 yrs. 2.5 cc. 18 days	5 yrs. 7.5 cc. 14 days				
5	9	8			13	5			14 mos. 5 cc. 14 days	5 yrs. 5 cc. 00 days				
6	5	6			5	1				9 yrs. 2.5 cc. 10 days	15 yrs. 5 cc. 11 days			
7	3	2			5	2								
8	1				1	2				5 yrs. 5 cc. 13 days				12 yrs. 5 cc. 10 days
9										4 yrs. 5 cc. 15 days			6 yrs. 2.5 cc. 9 days	
10	1	1			1	2		1	2 yrs. 5 cc. 12 days 3 yrs. 5 cc. 14 days 3 yrs. 5 cc. 13 days					
11						1							6 yrs. 5 cc. 14 days	
12		1			2									
13									2 yrs. 5 cc. 17 days					
14													6 yrs. 5 cc. 14 days	
Not Known	3	1	2	2	2	1		1	7 mos. 5 cc. #					
Total	99	64	6	3	58	33	1	2	8	6	1	1	4	1
	172				94				15			6		
%	60				33				5			2		

*Each case given with age of patient, dosage of serum and incubation period.

#Serum was administered the day before the rash appeared.

of 1932 convalescent serum was distributed for 505 cases. Of these, reports were received on 287 cases. The private physicians were very cooperative and of great assistance in determining and recording the results. Hospital cases formed the greatest number upon which no data could be obtained. The cause of this was unavoidable since most of these exposed and immunized children were not kept under observation, but were sent home under quarantine and these cases could not be followed.

Although an attempt was made to establish 5 cc. as a minimum dose, it was found that physicians at times divided the dose between two children. There were 16 such instances. The remaining children were given 5 to 7.5 cc. as advised. Chart 1 is a summary of the results obtained. It can be seen that 172 or 60% were completely protected and 94 or 33% developed attenuated measles. Consequently, 93% were afforded protection. It is likely that a higher percentage of complete protection could have been achieved but in many instances, a modified measles with an active immunity was the result desired. There were some children who though receiving the serum relatively and intentionally late, were still completely protected, and it is possible that they were not exposed to measles, or were immune.

Fifteen or 5% had a relatively moderate form of measles. Of these 15, three, though given the serum before eight days after exposure, were given an insufficient amount. Six received the serum quite late, and in the remaining six, the serum though given in time and in adequate dose, failed to protect.

Six cases or 2% developed characteristic severe measles. Four received the serum in the catarrhal or early eruptive period. Of the other two cases, one received only 2.5 cc. and developed measles presumably 7 days after contact and 5 days after serum administration. It is likely that this case had unwittingly been exposed before the known contact and the small dose of serum was really given on the eighth or ninth day after exposure rather than the recorded second day. Only one case receiving adequate serum early enough to produce modification, derived no benefit.

It is seen that three cases received serum after the ninth day without developing measles. It is more than probable that these children either were not exposed or were immune. There were eight receiving serum after nine days who developed a modified form of measles within 2-4 days. In these cases the exposure must have been light and the amount of contact relatively negligible. These cases might have developed a very mild measles even without any serum administration.

Chart 2 summarizes the results according to age. It will be observed that in the youngest age group of 0-3 years, there was complete protection in 58% and sero-modification in 36%, or a total protection of 94%. Only one child, of the 166, developed typical measles despite adequate serum administration. No complications were reported. Such results are significant when one reflects upon the severity of the disease and the frequency of complications in this age group. Although it can hardly be expected that the serum protection should work with mathematical certainty, there is an additional margin of error that appears in the interpretation by different individuals of the cases reported to us.

CHART 2. RESULTS OF IMMUNIZATION IN RELATION TO AGE OF CONTACTS

Age	Total	No Disease		Modified Measles		Moderately Severe Measles		Typical Measles	
		#	%	#	%	#	%	#	%
0-3 yrs.	166	99	60	58	35	8	4.5	1	0.5
3-10 yrs.	107	64	60	33	30	6	6	4	4
10+ yrs.	9	6	66	1	11	1	11	1	11
Not Known	5	3	60	2	40				

CHART 3. RESULTS OBTAINED WITH EACH POOL OF CONVALESCENT SERUM

Lot #	Donors	Day after Disease Serum Collected	CC.		DAY										Total	%
					1	2	3	4	5	6	7	8	8+	?		
I	4	10	225	No Disease	3	3	4	14	6	3			2	2	37	56
	1	12	75													
	1	8	100													
	1	7	75	Modified Measles	2	3	1	8	4	2			2	3	25	38
	1	6	95													
	1	5	72													
	—			Typical Measles					1	1		1	1		4	6
	9															
II	2	13	240	No Disease			1	1							2*	
	1	17	110													
	1	11	60													
	1	?	35	Modified Measles			2				1				3*	
	—															
	5			Typical Measles					1				1		2*	
III	2	8	200	No Disease	2	4	4	6	2	3	1				22	50
	1	10	100													
	1	11	85													
	1	18	90	Modified Measles		1	2	5	2	1	2		3		16	37
	1	28	90													
	—															
	6			Typical Measles				1		1			4		6	13
IV	1	75	125	No Disease	2	3	5	3	3	2	1				19	43
	1	50	125													
	1	31	110													
	1	30	120	Modified Measles	2	4	1	7	4	1	2				21	48
	—															
	4			Typical Measles		1	1	1					1		4	9
V	1	37	125	No Disease		7	5	4			3			3	22	65
	1	12	130													
	1	8	50													
	—			Modified Measles		1	1	2	5			2			11	32
	3															
				Typical Measles		1									1	3
VI	1	96	110	No Disease	4	10	14	3	1			1		3	36	68
	1	77	125													
	1	52	125													
	1	19	105	Modified Measles		2		4	3	2	2			1	14	26
	—															
	4			Typical Measles			1					1	1		3	6
VII	1	51	105	No Disease	6		12	7	5	3			1		34	87
	1	28	120													
	1	21	105													
	1	11	90	Modified Measles			1						2		3	8
	1	8	110													
	1	5	100													
	1	?	115	Typical Measles									1	1	2	5
	—															
	7															

* Too few for computation.

To illustrate, a number of children were recorded as having received sufficient serum on the same day as exposure, yet the patients developed modified measles. Although this result was satisfactory, further investigation disclosed the fact that the physician dated the exposure from the time that the immunized child's brother or sister developed the rash, ignoring the fact that intimate contact had been maintained during the catarrhal infective period preceding the eruption. But even when such reports are excluded, others remain of children who received serum at an early period, yet modified measles developed. There are also six children who should have been protected but who developed moderate measles and one case a severe measles. In these instances, it is possible that the amount of infectious agent implanted on exposure was unusually large or the patients may have been in very poor physical condition. It is an indication, nevertheless, that a minimum dose should not be employed, but one with a sufficient margin of safety to ensure adequate protection. Furthermore, whenever possible, all the factors minimizing the efficacy of serum should be considered in each case, and serum dosage and optimum time of administration then decided.

CHART 4. RESULTS OBTAINED IN CONTACTS GIVEN 2.5 CC. OF CONVALESCENT MEASLES SERUM

Day after Contact	No Disease		Modified Measles		Moderate Measles		Severe Measles	
	No.	Age	No.	Age	No.	Age	No.	Age
1								
2			1	6 yrs.			1	5 yrs.
3	1 1 1	1 yr. 4 yrs. 6 yrs.	1	7 mos.				
4	1 1 1	1 yr. 4 yrs. 6 yrs.	1	4 yrs.	1	3 yrs.		
5	1	1 yr.	1	1 yr.				
6	1	6 yrs.			1	9 yrs.		
9							1	6 yrs.
Total	8		4		2		2	
%	50		25		12.5		12.5	

There were 16 cases that received 2.5 cc. of serum. Chart 4 summarizes the results with the ages of the patients. Eight cases were completely protected, four developed modified measles, and four developed more or less typical measles. One of this last group was given the serum on the ninth day, but the others received the serum early enough to expect protection. Although this is a small group, too small to be conclusive, it indicates the advisability of establishing 5 cc. of serum as the minimal dose, with increasing amounts for older children.

It is of interest to consider the results obtained with the different pools of serum, made up of samples of blood collected at varying intervals after defervescence. Because of the scarcity of available adult donors, there were times when we were compelled to use donors who had recovered from measles, one, two and in one case, even three months preceding the time of bleeding. As previously stated, we included in the pools, serum from fresh convalescents so as to obtain a relatively high immune titer. Chart 3 reveals the effect from these different pools. With the exception of Lot II, we received reports from 34 to 66 cases for each lot of serum. It appears that there is not a great deal of difference in the efficacy of the various pools despite the difference in the period elapsed between defervescence and collection. Lot VII seems to indicate greater potency for complete protection than Lot I, a result that is surprising in view of the fact that Lot I consisted of samples of blood drawn not later than 12 days after defervescence as compared with Lot VII in which only one-half of the blood was drawn from fresh convalescents. This greater potency may be more apparent than real. Serum from Lot VII was used in the last part of the season, when measles cases were subsiding both in number and severity and the exposures may not have been as intimate or the amount of infection as great as occurred during the height of the epidemic.

Serum from Lot IV (made up of samples of blood drawn 30, 31, 50 and 75 days after deferescence) had the least beneficial effect in complete protection, 43%, but the total of complete and partial protection 91%, compares favorably with the other pools. It is significant that, clinically, the results from

the different pools were quite similar. The practical importance of this is that it increases the source of serum supply and its availability. Convalescent blood is obtained almost entirely from adults, in whom measles does not occur frequently. Children are not employed as donors, chiefly because they are too young to furnish any satisfactory amount of blood, and even when older, it is found almost impossible to gain the consent of their parents. It is very difficult to obtain the required amount of measles convalescent serum from adult patients within 10 days of their illness. If, as we have found, the blood maintains immune power to give the desired protection in the dosage used for a period 2 to 3 months after defervescence, then the same individuals may furnish blood two or even three times, and other patients, not available immediately after their illness, may act as donors at a somewhat later period. In this way, it will be much less difficult to secure and maintain an adequate supply of serum.

Due to the difficulty of obtaining serum, there were short periods during which no convalescent measles serum was available, and at this time pooled adult normal serum in 20 cc. doses was recommended. We have received reports of the use of this serum in 25 instances. Chart 5 summarizes the results

CHART 5. CASES RECEIVING POOLED NORMAL ADULT SERUM

Day after Contact Serum administered	No. Cases	No Disease	Modified Measles	Unmodified Measles
1	3		2	1
2	1	1		
3	3	2	1	
4	12	8	4	
5	6	3	3	
Total	25	14	10	1
%	100	56	40	4

that were obtained. The serum was used in all cases within 5 days after exposure. In some instances, the reports indicate that the full 20 cc. that had been supplied was not used. Conclusions cannot be drawn from so small a number of cases, but the results indicate that those receiving smaller doses than 20 cc. did not derive as much protection as those who were given the complete dose. There were 14 patients, or 56% completely protected, 10 patients, or 40%, developed modified measles and one developed a moderately severe measles. Such results are highly satisfactory and compare very favorably with those from the convalescent serum. Normal adult serum can be obtained with ease and at short notice, and, from the evidence, if used in large enough amounts, appears to be a trustworthy and effective substitute for convalescent serum.

CONCLUSIONS

1. 287 measles contacts were treated with measles convalescent serum, with complete protection in 60% and attenuation of the disease in 33%.

2. The minimum dose employed should not be less than 5 cc.

3. Other factors, such as age, weight, general physical condition, the presence of some other infection, intimacy of contact, length of contact, and interval elapsing between initial contact and injection, should be considered in determining the necessary amount of serum to make an adequate dose.

4. If possible, every case should be individualized and, depending upon those factors influencing the efficacy of the serum, the proper dose and optimum time of administration should be decided to produce the desired result for each case.

5. It is preferable to allow the development of sero-attenuated measles, with its resultant active immunity, except in sick or poorly nourished patients. In the latter group, complete protection should be attempted under these adverse conditions, and at some future and more favorable time, on re-exposure of the child, the usual plan of sero-attenuation can be followed.

6. Serum from patients who have had measles within 2 or 3 months seems to be just as protective as that from recent convalescents. This knowledge increases the available donor list and the possibility of maintaining an adequate supply of serum.

7. Twenty-five measles contacts received adult pooled normal serum with complete

protection in 56% and sero-attenuation in 40%.

8. Pooled normal adult serum is readily available. In larger amounts of 20-40 cc. it makes an effective substitute for convalescent serum and can be used with confidence whenever the supply of convalescent serum is diminished.

We take this opportunity of expressing our appreciation to Dr. Herman N. Bundesen, President of the Chicago Board of Health and to Dr. Julius H. Hess, for their interest and important aid in the work of the Samuel Deutsch Convalescent Serum Center.

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PRESENT STATUS OF PROSTATIC RESECTION

From 1927 to April 15, 1932, Theodore M. Davis, Greenville, S.C. (*Journal A. M. A.*, Dec. 3, 1932), states that he performed 372 prostatic resections. The majority of the patients operated on during 1927 and 1928 had obstructions of the smaller type; a good number, however, had typical adenomatous hypertrophy. It is gratifying that although he did not remove as much tissue at that time as he would in a similar case today, the results have been satisfactory and the patients are free from obstruction. During 1929, 1930, 1931 and 1932, approximately 25 per cent of the cases have been of the larger types. He cannot estimate what the percentage of recurrence in all these cases will be over a five or ten year period; time alone can demonstrate. It is probable that there will be a higher percentage of recurrences than the results in his earlier cases would indicate. Considering the experience of Caulk in a large number of cases over a ten year period and of the few cases of his own that have extended over four or five years, he is inclined to believe that the incidence of recurrence will be small.

THE FAMILY PHYSICIAN

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In the September number of the Illinois Medical Journal we notice an editorial, under caption of "In The Family Physician Rests The Hope Of The Future Stability Of Medicine."

That is a mighty fine title and the following remarks are trite and to the point, but we would like to know where you are going to get the "family physician." That is the "family physician" of days gone by. The physician of today is *too well* educated and his education has been so expensive and the incidental investment therein has been too great for him to settle down to the more or less underpaid position of general practitioner. He has, to a very considerable extent, equipped himself so that he feels that he can enter one of the higher paid specialties immediately after finishing his medical studies. With the idea of becoming one of more or less limited medical duties he does not take unto himself a broad view of medicine as a whole, for why should he know anything about the treatment of the baby with the colic if he is to be a surgeon—all young men want to be surgeons, you know—or an oculist or aurist, or one of the several other followers of special lines? Why should he know much if anything of pneumonia if he is to become a gastroenterologist? If he is to become a surgeon he does not feel that he should give much time to the study and subsequent application of drugs or chemicals in the treatment of the sick. Anyway, so we have been told, surgery is really the only worth while therapeutic agent, when all is said and done. Anything abnormal should be "cut out" and removed, for in the main any results attaining from medical therapy are nothing more than coincidental, for nature would have brought about a cure had the patient never had a doctor.

The young man, in the way of time and money, has expended a small fortune before he gets even a look in to profit producing work. His investment in these days of "higher medical education" is so great that he, per force, *must* step into the highly paid specialties, if he would even earn interest on his investment. He simply cannot afford to settle down and do a general practice, for that would put him eternally in debt, for he would receive little or no return on his invested time and dollars. Some say the young man, upon graduation, is indebted to himself to the tune of not less than $25,000. Such being the case, the young man's income would have to be not less than $1,500 per year simply to pay the interest at 7% on his educational investment. Deducting his overhead it is very probable that his interest on the investment would dwindle considerably under 5%.

But few of our young men of today have any desire to bury themselves in country locations. This is partly due to the fact that they have learned only the hospital side of the practice of medicine and so feel that they cannot carry on their activities outside the four walls of the hospital. They have not been taught to depend upon themselves and so would be at a loss were they taken away from the only workshop of which they have much cognizance, the hospital. But few of them would even think of or much less attempt a "kitchen table" operation, for how could they be sure everything was sterile and that infection would not follow in the wake of any "at home" surgery? This in spite of the fact that our forefathers in medicine did many operations and with mighty good success in the homes of their patients.

Because surgery has been touted to us as the therapy, par excellence, the young man of today receives far too little in the way of education in drug medication. In fact, so we have been told, some medical schools have practically dropped materia medica from their curricula. As a consequence our young men do not know all the tools of their trade. It is not until they leave school and the patient demands relief from his discomforts that the young doctor begins studying much in the way of drug therapy and much of his information comes to him via either the detail man or what we older men call the "waste basket" stuff that reaches all of us daily in our mail. Through both these avenues of post-graduate education (?) our attention is not called to the old and time tried—and cheaper—medical agents, but to the pharmaceutical specialties which give the makers bigger profits than do the staples of our forefathers. Of course, having been advised by those who would tell us what to do, we know or are supposed to know that those old time

things which did so well for our forefathers are really not worthy of even our passing attention. *They Don't Give Their Makers a Big Enough Profit!* Of course aconite is not as dependable as some coal tar derivative with a fancy name and selling at a cent or more a grain and too, aconite is a dangerous drug, you know and should not be employed. There are a lot of old time drugs that apparently gave us wonderful results—maybe Old Dame Nature did the work—which have been thrown in the discard. Of course such drugs, having meandered out of the pharmacopeia, are given no attention in our medical schools, for if a thing is not U. S. P., or its makers have not paid certain journals much money for publicity space, then such things are worthless. This is just another reason why the young graduate of today cannot become a "family physician" in every sense of the word.

The young man in medicine today does not learn a trade, but rather a profession, for he does not reach anything bordering upon a medical atmosphere until he enters his junior year in medical school. Even then most of his work, in fact all of his own, is theoretical, for he does not contact directly with the sick. He does not have to form judgment, for that is done for him by his teachers. Even in the hospital he does not, as an interne, have to place great reliance upon himself, for there again the chiefs of staff do much of his thinking for him. One might as well put a lad alongside a lathe, planer or whatnot of the machine shop with a book and let him look on while a journeyman ran the machine and expect to turn out a finished machinist. It is "getting one's fingers actually into the pie" that makes the finished workman, be he ditch digger or doctor. We grant that more "finished" doctors may be turned out today than thirty or forty years, if not longer ago, but they are only "finished" in a theoretical sense, for theirs has not been the practical education when we older heads in medicine followed and actually worked with our preceptors. Through doing such work we gradually obtained a sense of judgment and to the extent that we frequently took second thought, a thing more or less uncommon with our young men today, before doing this, that or the other thing. We began contacting to a greater or less degree with actual patients almost the moment we began our medical studies and we soon began to differentiate the differences between the normal and abnormal conditions of those with whom we were thrown. In many instances we almost if not quite reached the point where, like some of our quack friends, we could diagnose certain conditions "without asking a single question." How many of our young men of today can do things of that sort? Very few, we opine, and doing things without asking too many questions is one of the things that goes to make the successful family physician. The study of humanity is of just as much importance in preparation for the practice of medicine as that of the study of either surgical or medical therapy. The family physician, if he be successful, studies the characteristics of his various patients as closely as he does their diseases, for he knows that no two persons are absolutely alike and also that no two respond, absolutely, to the same methods of therapy. Under the older methods of medical education such differences were brought to the attention of the student by his preceptor. He learned humanity in its various phases along with medicine and so was able, upon graduation, to cope with the many peculiarities presenting.

Today the young man in medicine has it forced upon his mind that he *must* depend upon one of the various laboratories which enter into diagnosis and many other things connected with the treatment of the sick. Here is another reason why the young man does not want to become a family physician and "bury himself" in some village more or less far removed from the city and its laboratories. He has not been taught that he has several special senses and if they are put to work he can envolve a working diagnosis at times without the use of the x-ray, test tube or whatnot. Sir James Mackenzie once remarked that the various mechanical tools employed in the diagnosis of heart conditions were nice things to verify diagnosis, but that they were not absolute necessities in that connection, providing the doctor had acute special senses. The same holds good in the consideration of other abnormalities. If we see a patient with a dropsical condition below the waist, or possibly the diaphragm, we are pretty sure, without calling on the laboratory for a moment, that the heart, and not the kidneys, is involved. If the edema is above the waist and we find

puffy eyelids, we are rather sure we have a nephritis with which to deal. We can diagnose such cases without asking many or any questions and our diagnosis will be substantiated by mechanical or chemical means. One does not need an x-ray picture to diagnose a palpable fracture, but of course such pictures should always be made, that we not be subsequently questioned—or sued for malpractice.

That the young man of today does not know his materia medica is shown by the way he handles many pathologic processes. We have seen a pneumonia patient given as many as five prescriptions at once and these carrying four or five times that many remedial agents. We have seen such patients started on digitalis at the onset of the disease and before it was determined that the heart might be failing. We have seen other cases in which there was no attempt made to alkalinize the patient or enforce elimination; the latter to our mind being the key note in the successful treatment of pneumonitis and that regardless of its type. We have seen other young men depend almost wholly upon bacterins and serums and frequently noted that their mortality rate has been large. But few of the young men of today seem to realize that it is almost if not a tragedy to move either a pneumonia or typhoid patient, that such moving in many instances means almost sure death. How many of our young men realize that aconite is a mighty fine thing in pneumonitis; that it not only acts to moderate the temperature, but sedates the patient and makes him more comfortable?

In the treatment of heart disease the young man is taught to use digitalis in practically all cardiac abnormalities and that in rather heroic doses; all this in spite of the fact that our authorities on materia medica tell us that the uses of digitalis are few and limited. We have stood along the side lines and seen heart patients die, but not from heart disease, but digitalis heart block when the remedy has been administered without rhyme or reason. This is just another reason why the young graduate of today will not make a successful family physician. He does not realize that in many instances strychnine is far preferable to digitalis under certain conditions. Nor does he seem to realize that digitalis *never* wholly corrected an organic cardiac lesion.

In spite of our higher education, our mortality rate has not shown much decrease. It is no doubt true that life has been lengthened by some years, but that cannot be wholly credited to the medical man, but rather to the sanitary engineers who have given us better places in which to live and who have corrected many things that in the past led to disease production. In spite of such improvements, when man does become ill his chances of recovery are no better than they have ever been and the mortality rate has not been reduced very preceptibly, not even with our more highly educated young doctors.

The day is rapidly approaching when the people, of their own accord, are going to demand less surgical and more medical treatment. More and more are they asking, "Doctor, do I have to have an operation?" Like we of the profession, the public is becoming aware of the fact that surgery is not all that it promised to be and that it is not a panacea for every ill under the sun. We do not say that surgery is worthless, or nearly so, for it has its indications, but also has drug therapy and in many instances is the latter preferable. But the young man of today is educated to enter some big fee surgical specialty and so cannot be a good general practitioner, for he is bound about by the narrow borders of specialism and so cannot be a broad gauge practitioner, such as you and I have known in the past.

If the family physician is to come into his own there must be a decided change in our methods of medical education. Also, the cost of medical education must be lowered so that the young doctor will not have invested such huge sums before becoming able to become a wage earner. He must not have to pay interest on anything like a $25,000 investment through his efforts as a practitioner. All that entails worry and worry interferes with good and efficient work.

During his ten years or so in the various pre-medical and medical schools the student lives very largely among the bright lights of the cities. As he says, "there is always something doing," both in and outside of school. He, after entering practice, does not like to "bury himself" in those places "where there is so little doing." Only recently we were in a position to offer a young man a wonderful place

in a small town and where he would at once become independent of all worry. Did he take on the proposition? He *did not* and said "Who wants to live in the backwoods so far from everything?" That young man may sometime be a more or less successful family physician—which we doubt, for he already has his eye on a specialty that pays *real money,* as he puts it.

The place of the family physician must be made more popular in every way before it will become attractive to the doctor of today. The day will have to come when surgery will cost less or internal medicine more before we may look for a vast horde of family physicians, unless, of course, the cost of medical education be reduced to a considerable extent. The teachers of today should remember that some very successful doctors came out of the two and three year medical courses. They made mighty fine family physicians.

EMERGENCY RELIEF FOR MEDICAL AND SURGICAL AID

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Medical aid is a problem of great importance, and in this plan, I shall endeavor to take care of our indigent sick, by giving them proper care and service during this long, drawn out depression.

Before going into detail, I wish to state that not only must our poor who are already receiving aid from the Emergency Relief be considered, but also that great mass of people who are still working for meager salaries. When illness strikes the homes of the latter class, they are even more helpless than our real destitute. Their incomes cover only the bare necessities of life, and do not include any provision in their already overtaxed budgets for medical care.

In regard to the recent discussions in our daily newspapers concerning hospital beds for our poor, it is indeed a known fact that improper care and treatment are being rendered in our over crowded and practically bankrupt County Hospital. Not all patients can go to the hospital when they are sick, and most of our needy, at the present time, still have a family doctor in whom they have implicit faith. Can the doctor conscientiously continue to treat these patients gratis? The answer is "No!" It is a known fact that the doctor was the first to feel this depression, and was, perhaps, the hardest hit of our honored professions. What is the outcome? Simply this. When the physician is called upon today to see a sick patient, what confronts him? This—the patient has already been sick for a number of days. Possibly, the county doctor was out to see him, and the aspirin which he has left has failed to make the patient better. The M.D. is now faced with a much harder task than if he had been called early in the illness, as in previous years. Result—if death does not intervene, there is a long and tedious convalescence with much added expense to our Emergency Relief.

There is a need for more charity beds, but charity beds alone will not remedy the situation. There are a great many patients who can be treated at home, if proper medical care is provided. Proper medical attention can only be given at this time, frankly speaking, by the doctors of Chicago, when they know that in serving our poor and needy public, they in turn shall receive some compensation for their labors and knowledge. It is an established fact that the poor and needy who are on the roster of our Emergency Relief get food, coal, light, clothing, and other necessities of life, but medical needs, more important than some of the items mentioned, are entirely neglected in some cases, and in other instances, when medical aid is finally given, it is practically valueless from a medical and scientific standpoint.

Those in need of medical care at the present time are dependent upon the Cook County Hospital, county and city physicians, dispensaries, and supposedly free clinics. During normal times, the above mentioned agencies could not handle the situation, so how can they handle it now? I venture to say that if statistics, combined with an actual check-up on the individual practitioners of medicine, in regard to their charity work, were presented to the general public, they would reveal figures ranging from sixty to seventy-five per cent. of total amount work done without compensation whatsoever.

Our adverse weather conditions, coupled with insufficient clothing and food, financial worries and upsets, are indeed the ideal culture media

for influenza. At the present time, mild flu is running rampant throughout our great city. What would happen if we had a real epidemic, such as was experienced in the past? God only knows!

To all the duly licensed and regular practitioners of medicine, Fellows of the A. M. A., and members of the Chicago Medical Society, and its component branches in the state of Illinois, who are willing and ready to co-operate with the Emergency Relief, I present the following plan to the Emergency Relief for consideration, action, and changes they may deem necessary, providing they do not deviate grossly from the original plan.

There are three types of patients to consider in this great health saving work:

1. The ambulatory type, i.e., those who can go to their doctor's office for treatment.
2. The home case.
3. Hospital cases, which must be divided into:
   a. surgical cases
   b. medical cases
   c. obstetrical cases.

Let us consider the first type of patient. This, by far, will consist of the largest group. How shall we handle them?

Medical tickets shall be the medium of exchange, and these shall be divided into three classes:

1. Office treatment
2. Home call
3. Hospital case.

Along with these tickets, a preliminary and final report blank shall be furnished, these to be filled out by the attending physician. These preliminary blanks that the doctor should be requested to fill out, shall consist of diagnosis, plan of treatment, and prognosis. The final report blank must be filled out at the termination of illness, and this is to consist of a combination medical report and bill for services. The preliminary report must be filled out within 24 hours, and mailed, together with the medical ticket, either to the District Relief Station, the main office of the Emergency Relief, or any special branch they may have for medical service. People asking for medical aid must present themselves for their medical ticket and blanks, at their neighborhood relief district station. In case of extreme emergency, any adult member of the family may apply for another. It should be fully understood between all doctors rendering this service that the Emergency Relief reserves the right, and has the power to investigate each and every case. This would tend to prevent fraud. Also, recommendations for doctors by the Emergency Relief shall be considered unethical, unless the person applying for aid has no family doctor. Then, each district shall have a list of doctors in their territory serving the Emergency Relief, and each shall be called in rotation for service.

Returning to our office treatment, if specific medication is needed, the doctor, upon request, shall be furnished with same. No matter what the treatment may be, the office rate shall be limited to one dollar.

The Home Case: A fee of two dollars for the first visit, and if extra visits are necessary, they shall be at the rate of $1.50. These rates, during this crisis, must include night service, if necessary.

In reference to these home cases, many times the doctor will be confronted with the situation that there is no medical ticket there, especially in the case of night emergency calls. Here the doctor must leave a note, stating that he called, the time, and the nature of the emergency illness. This note must be presented within 24 hours to the Emergency Relief station, so that proper blanks be furnished the doctor, together with the medical ticket. Failure to procure these blanks will tend to cease medical attention, and their name to be reported to the Emergency Relief for further action and treatment.

Hospital case: Hospital cases must be divided into:

a. Surgical
b. Medical
c. Obstetrical.

Medical cases, no matter what the condition may be, the doctor shall receive compensation at the rate of $1.00 per day, whether his hospital visits consist of one, two, or as many visits as he may deem necessary for this particular case. Surgical and obstetrical cases, as far as compensation to the physician, surgeon, or obstetrician, a definite fee table must be worked out by the Emergency Relief, and this fee table, I suggest, shall be 50% of the minimum fees as listed by the Chicago Medical Society's fee table in the Chicago Medical Blue Book.

If extra hospital beds are to be provided for, which we are in extreme need of at the present time, I suggest that this proposition be presented to all Class A hospitals, without favoritism. If every hospital that is willing to cooperate on a no profit basis shall be permitted to participate in this real life saving work, this will eliminate certain hospitals from being filled to capacity, and others more than half empty. It will also provide hospital staffs a definite place to send their needy patients, and continue to treat them in the institutions with which they are acquainted.

The foregoing plan will be easily understood by those who are on the emergency relief list. The other class, as mentioned early in my report, consisting of that working type, who are unable to provide for medical service, would benefit under the following plan:

Registration of persons working, but not making enough for medical care. Registration application should have among its questions the following: Weekly salary, number of dependents, number of people working in same home, financial obligations, such as payments to finance companies, etc., and family doctor.

Rejection or acceptance of applicants shall be left entirely to the Emergency Relief. If accepted, they shall be furnished with a medical identification ticket, instructing them, in case of illness, to present this ticket to their neighborhood relief station, and there they shall be given the medical ticket, together with proper medical blanks, and further instructions.

As stated before, the medium of exchange will be these medical tickets, based upon the final report for services rendered. The doctor should forward these bills for service on proper blanks to the designation, as shall be specified. These in turn shall be redeemed just as food stuffs, coal, etc., furnished by different merchants, when they present their bill for payment.

The question may come up as to where all this extra money is going to come from, when our relief fund is far from being adequate to take care of food, etc. I leave this entirely in the hands of the Emergency Relief.

3205 Ogden Avenue.

Visitor: "What a quaint accent your children have."
Father: "Yes; between the talkies and the radio I don't know what they're saying half the time."

THE SIGNIFICANCE OF THE ELECTROCARDIOGRAPH TO THE GENERAL PRACTITIONER*

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Although an electrocardiograph suitable for clinical purposes was perfected by Einthoven in 1903,[1] it is only within the past decade that this method of study has been widely applied in clinical medicine. With increased use, interest in the significance of the electrocardiogram has been intensified. For this reason the subject assigned is timely; many practitioners are eager to know to what extent the results of electrocardiographic study are merely interesting as scientific data, or actually useful and helpful, even indispensable.

From the standpoint of clinical medicine the electrocardiogram is of value:

1. In the objective demonstration of modern conceptions of cardiac activity.
2. In the diagnosis of cardiac irregularity.
3. In the recognition of myocardial disease.
4. In the determination of preponderance of either ventricle.
5. In coronary disease, especially acute closure of a vessel.
6. In the study of the therapeutic effects of drugs, especially of digitalis and its congeners and quinidin.

In a broad sense the electrocardiograph affords an insight into two main functions of the cardiac structures, stimulus production and stimulus conduction. Abnormal sites of stimulus production are revealed in the electrocardiogram by the presence of ectopic beats, extra-systoles, of auricular, nodal or ventricular origin, auricular fibrillation, auricular flutter and certain types of tachycardia. Disturbances of conduction include the abnormalities of auriculo-ventricular conduction and those of intra-ventricular conduction; the latter are responsible for the deformities of the ventricular complexes characterized by widening and deformities of the R-S complex. The signs of ventricular preponderance are probably the result of conduction through a larger mass of muscle. Increase of height or

*Read before Chicago Medical Society, November 30, 1932.

width of the P wave, often with notching, indicates prolongation of conduction within the auricular muscle, due to auricular hypertrophy.[2] Abnormalities of the Q and T waves cannot be included under such simple classifications; thus far the Q and T waves have not been related with certainty to anatomical change or physiological phases of the heart.

The electrocardiograph has helped the physician to visualize normal and pathologic cardiac activity. The ocular demonstration of the deflections produced by the contraction of auricle and ventricle, occurring in regular sequence, and of the uniform time relationships throughout the course of a normal contraction, has illustrated the accepted theories of stimulus production and conduction, of muscular irritability and contractility.

Extensive experimental studies have related many electrocardiographic abnormalities to alterations in cardiac structure or function. These may result from extrinsic or intrinsic causes. Extrinsic factors are usually nervous or toxic; other factors such as thyroid dysfunction or anoxemia may be effective. Intrinsic causes include alterations of the heart due to disease within itself. As we have added to the results of experimental work, accumulated clinical and pathological observations which shed light on the subject from a different point of view, the knowledge thus obtained has given to the practicing physician a clearer insight into the pathological physiology of the heart and the consequent electrocardiographic abnormalities.

Any portion of the heart muscle may be the site of stimulus production, the site of origin of ectopic beats. An actual or relative increase of irritability of the cardiac muscle underlies the production of ectopic beats. The initial deflection of the electrocardiogram, the P wave, is the mark of auricular activity. Variations in the shape and direction of the auricular complexes are indicative of ectopic origin of the impulse; these features are dependent upon the site of origin of the stimulus and hence the direction of the excitation wave of the premature beat.

Following the P wave in the normal electrocardiogram is a silent period during which the impulse to contraction is passing from auricle to ventricle, through the specific conducting tissue, the Bundle of His. Within 0.2 of a second from the beginning of the auricular deflection ventricular contraction begins and this, in turn, is followed by the pause of cardiac diastole. Ectopic or premature nodal beats are those which arise in the conducting tissue from the auriculo-ventricular node to the division of the main branch of the Bundle of His. Nodal ectopic beats, arising between the auricle and ventricle, may be unaccompanied by P waves, or the latter may be abnormally close to the R spike or elsewhere superimposed on the ventricular complex. Ectopic beats of ventricular origin are common; in the electrocardiogram these appear as grossly deformed ventricular complexes, occurring earlier than is expected, followed by a compensatory pause and not preceded by an auricular wave. Ectopic beats are not diagnostic of intrinsic cardiac disease. In the present state of our knowledge, we frequently must accept the extra-systole, especially of the ventricular form, as a functional disturbance unless accompanied by definite symptoms of heart disease. When the history discloses previous disease likely to be followed by cardiac involvement, the premature contraction is more important.

The significance of auricular fibrillation and the possibility of successful control or relief of this condition have been mainly demonstrated by electrocardiographic study. The various types of tachycardia and the presence and degree of heart-block may also be identified by the electrocardiogram.

Cardiac irregularities have been so well studied that they may often be correctly diagnosed without the use of instrumental means. This is particularly true of ectopic ventricular beats and auricular fibrillation. The diagnosis of ectopic beats of auricular and nodal origin, the determination of the origin and character of a paroxysmal tachycardia, the demonstration of heart-block of various degrees, practically require instrumental procedures.

The electrocardiogram often reveals objective evidence of myocardial disease. Occasional discovery precedes the appearance of clinical signs or symptoms. The diagnostic value of the electrocardiogram in the recognition of myocarditis in the course of acute

infectious diseases has been demonstrated. The electrocardiographic abnormalities which are found in such conditions are usually ectopic beats of variable origin, auricular fibrillation, T wave anomalies, and disturbances of auriculo-ventricular conduction. Gross changes of the R-S complex are not frequent. Low amplitude deflections may also be found in the course of infectious diseases. The significance of such deflections has been the subject of much dispute. It is the opinion of Sprague and White[3] that they are of diagnostic importance. They say, "Excluding the temporary effect in hypothyroidism, low voltage has never been found, in our experience, in records from normal hearts. It is a finding of diagnostic and prognostic importance in forming an opinion of the myocardial ability of any individual." They defined "low voltage" thus: "the QRS deflections of these patients do not deviate in either direction from the base line more than 5 mm. in any of the three customary leads."

In the degenerative types of disease obscure symptoms and minor physical findings may become important upon the discovery of electrocardiographic changes: these usually involve the ventricular complexes presenting widening and slurring of the R-S complex, depression of the T wave, alterations of the S-T portion of the electrocardiogram and disturbances of auriculoventricular conduction.

T wave depression is not always a sign of myocardial disease. Its occurrence as the result of digitalis medication and even as a sign of digitalis effect has been generally accepted. Recently Brams and Gaberman[4] have challenged these views. They believe that "Inversion of the T wave can not be regarded as an early or constant sign of digitalis effect." Holzman[5] states that widening and notching of the QRS complexes, negative T waves, and low voltage of all the waves occur in myxedema; White and Wood[6] found T wave negativity in cases of uremia to which they attributed the abnormality. These examples are sufficient to indicate instances of T wave abnormalities in the absence of cardiac disease.

In many cases of cardiac disease, recognized clinically with ease, the value of the electrocardiogram is confined to confirmation or elaboration of the diagnosis and to enlightenment regarding prognosis. Perhaps the electrocardiogram reveals a surprising degree of myocardial change or of relative ventricular preponderance, much more pronounced than had been anticipated from the clinical examination. On the other hand, the absence of electrocardiographic findings does not disprove a clinical diagnosis based upon a satisfactory history and adequate physical signs. Cardiac disease may be present in cases in which the electrocardiogram deviates little or not at all from the normal. The failure of the electrocardiogram to help us in many cases of uncertain diagnosis and the inability to correlate all our electrocardiograms with clinical conditions are facts which must be accepted. It is a safe rule not to ignore the abnormal electrocardiogram even though symptoms are minor: it is equally important not to attribute too much importance to questionable electrocardiographic abnormalities.

With certain reservations the presence of ventricular hypertrophy may be discovered or confirmed by electrocardiographic study. Under standard conditions, with consideration of the build of the patient and of conditions which tend to displace the heart, the electrocardiogram reveals valuable evidence of left or right ventricular hypertrophy. Left ventricular preponderance is found especially in hypertensive cardiac disease and in syphilitic or rheumatic disease with aortic lesions. Right ventricular preponderance is usually the result of long-standing mitral disease, congenital cardiac disease or acquired pulmonary lesions. The "hanging heart" of the Habitus Asthenicus may indicate a shift of the cardiac axis toward the right but rarely does this condition present characteristic features of actual preponderance.

Medical directors for insurance companies have become interested in the opportunity, afforded by the electrocardiogram, to obtain objective evidence as to the condition of an applicant's heart. The types of cardiac disease which are most difficult for an examiner to detect are those which are loosely spoken of as the cardiovascular or degenerative diseases. In these types of disease the history is of the utmost importance. Diagnosis is often based almost entirely upon the statements of

the patient; this history is available to the physician consulted for advice, but it is not so readily imparted to an insurance examiner. Significant deformities of the ventricular complexes and disturbances of conduction assume importance in the estimation of an individual's insurability.

In recent years the electrocardiogram has become important in the diagnosis of coronary occlusion. The coronary T wave of Pardee is of especial significance. Failure to demonstrate this change in the electrocardiogram does not disprove the presence of coronary occlusion, but its demonstration is valuable evidence of such a condition. The work of F. M. Smith[7] showed the similarity of the changes in the human electrocardiogram to those which follow coronary obstruction in the dog and demonstrated many of the characteristics of the electrocardiogram following such occlusion. Studies in this connection have contributed to the ease and certainty of diagnosis of cases of coronary occlusion even in the uncommon cases in which pain is not a prominent symptom. The electrocardiogram may be decisive in the differential diagnosis between coronary occlusion and acute surgical disease of some one of the abdominal viscera, or disease which involves the spinal nerves. While typical evidence of coronary occlusion may be afforded by the electrocardiogram, it is important to avoid over-emphasis of findings which are not characteristic.

Through the use of the electrocardiogram much information of clinical value has been acquired regarding the effects, clinical and toxic, and the proper methods of use of digitalis and its congeners and of quinidin. This is of especial clinical value in the identification of the toxic rhythms of digitalis. Digitalis may produce all grades of heart-block; the electrocardiogram is indispensable for the discovery of the earliest sign of block, prolonged conduction time. Digitalis often produces T wave negativity which is of fairly characteristic contour; this is a sign of clinical effect rather than a toxic phenomenon.

Ectopic beats may also result from digitalis administration. Occasional ectopic beats may occur or an ectopic ventricular beat may occur after each normal complex, forming the so-called pulsus bigeminus, a danger signal calling for the discontinuance of digitalis. Paroxysms of ventricular tachycardia, a succession of ectopic ventricular beats, even more ominous, may develop. If ventricular fibrillation supervenes demonstration of the nature of the toxic rhythm is rarely obtained; sudden death is usually the event. Without the electrocardiogram the diagnosis of ventricular tachycardia is difficult. The sudden inception of regular rhythm at a rapid rate, in a patient under treatment with digitalis, especially in cases in which auricular fibrillation is present, is an indication for the immediate withdrawal of the digitalis.

This discussion may be terminated with a warning against overvaluation of the electrocardiogram. This method of study does not supplant clinical study. Diagnosis, prognosis, and therapy must continue to be based, not upon a single method of instrumental study, but upon the results of clinical study supplemented by available methods of instrumental investigation. Care should be taken not to convey to the patient the idea that the electrocardiogram is infallible. To the laity instrumental methods of study bear much of the stamp of certainty associated with scientific procedures in other fields. An incautious statement as to the poor prognostic import of an electrocardiogram may make an impression upon the patient which cannot be corrected.

Elser and White[8] have pointed out the role of artefacts in producing confusion as to the interpretation of an electrocardiogram. They discuss as causes of such artefacts, muscular contractions (movement while the electrocardiogram is taken), somatic tremor, nervousness, hyperthyroidism, spastic contraction of muscles, high resistance which may be skin resistance or the result of poor connections, outside current, faulty contacts and composite electrocardiograms.

The disposition to read too much into the electrocardiogram is hard to resist. Slight slurring or notching of the R-S complex especially near the base-line, slight flattening of the T wave, an equivocal S-T phase are usually without clinical significance. The diagnosis of ventricular preponderance should not be made too jauntily upon border-line measurements. Minor changes in the electrocardiogram may be due to mechanical causes

or to nervous influences. Respiratory changes of the electrocardiogram are common especially in the third lead; these changes include variation in the amplitude of the T wave, and of any or all of the components of the Q-R-S complex. The electrocardiograph has established itself as a valuable aid to clinical study and experimental investigation. In clinical work, conservatism in the interpretation of the electrocardiogram and its application to the case in hand will eventually make for a surer basis of our knowledge in this field and increase the value of the instrument to ourselves and our patients.

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ACUTE SUPPURATIVE THYROIDITIS WITH REPORT OF ONE CASE

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Suppurative thyroiditis, following acute or chronic thyroiditis and strumitis, is quite common as is evidenced by review of the literature; but of itself is quite uncommon.

A. Alldridge Mathews (1910) reported a case of acute suppurative thyroiditis which occurred following an attack of typhoid fever in a white adult male. Frank Lahey (1917) described three cases: two of which had a history of tonsillitis, and one developed a thyroid abscess during his convalescence from bronchopneumonia. P. Calcetto (1918) reported a case of thyroid abscess occurring in the course of an acute pyemic otitis and mastoiditis without lateral sinus thrombosis. The features of exophthalmic goiter which developed at the onset of this disease subsided following the emptying of the abscess. C. K. Edwards (1921) reported 4 cases of acute thyroiditis; two of which occurred following influenza, one of upper respiratory tract, and the last one during an intestinal obstruction following an hysterectomy.

J. P. Tourneaux (1920) described a case of thyroid and perineal abscesses in a man with typhoid fever. Both healed completely following incision and drainage. He also reported another case of gangrenous thyroiditis in a man 35 years of age with a thyroid previously sound. This condition developed following an attack of influenza. Cultures made from the lesion revealed streptococcus and pneumococcus. Moses Behrend (1924) reported 2 cases of abscesses and one of gangrene of the thyroid. Lambert Rogers (1927) reported one case of thyroid abscess occurring in a male 31 years of age following boils on the sternomastoid muscle, and another case in a female, aged 48, who had had a goiter for many years and the abscess developed immediately following an attack of influenza. Howard Schriver (1927) described a thyroid abscess simulating an infected thyroid cyst which was present for 15 years before becoming suppurated. E. C. Burhans (1928) reported 67 cases of acute non-suppurative thyroiditis and mentioned 200 cases by other authors. He concluded that this condition is much more common than was recognized by the profession in general.

Miles M. Porter (1929) reported an interesting case in a man 60 years of age, who, following a prostatectomy, suddenly died from asphyxia. At autopsy, an acute streptococcic abscess was found to have been engrafted on a chronic inflammation in an old, nodular, nonmalignant goiter. It completely surrounded the trachea and esophagus with its isthmus behind and lateral lobes meeting in front of the trachea, and having the carotid stretched over the front of the right lobe of the thyroid gland. J. M. Mora reported 2 cases in children who developed thyroid abscesses following acute streptococcic sore throat. One was 2½ and the other 13 years old. Howard M. Clute reported one case of acute thyroiditis following upper respiratory infection and hay-fever. The thyroiditis subsided spontaneously. Later the patient developed a septicemia, and during an operation multiple abscesses were found in the thyroid gland.

Etiology.—According to M. O. Shivers, bacterial invasion may be responsible for all thy-

roid pathology. Infection produces thyroiditis with or without suppuration. The latter is more common and less dangerous. It is not caused by suppurative bacteria and may run a course without evidences of any acute inflammation. The suppurative processes are rare, and are usually secondary to pre-existing goiters or to other suppurative and destructive processes within the thyroid gland. Antero Cantero of the Mayo Clinic made cultures of 50 colloid goiters of which only three failed to show any bacterial growth. In not one of these cases were the bacteria of the same species.

Inflammations of the thyroid are more common in the female and between the ages 20-40 years. It may occur in the course or following acute infections, upper respiratory diseases, skin diseases, chronic infections and constitutional diseases. Searls and Bartlett found acute thyroiditis as a sequel to tonsillitis, otitis media, scarlet fever, pneumonia, and chronic thyroiditis in generalized miliary tuberculosis. Charles Edwards mentions skin lesions, tuberculosis, non-specific adenitis, acute pharyngitis, laryngitis, Vincent's and Ludwig's angina, peritonsillar abscess and puerperal fever as causes of acute thyroiditis and concludes that the infection is usually hematogenous. Ballerio and Messerle suggest that the infection may occur through the digestive tract among other causes, and cite examples of acute thyroiditis occurring in the course or following typhoid fever and enteritis. Schriver concludes that infections of the thyroid may be hematogenous, lymphogenous, or by contiguity. Gilman has found ordinary pyogenic bacteria, such as pneumococcus, B. Typhosus, and B. Coli as causative agents of acute thyroiditis.

Pathogenicity.—The thyroid gland is considered by many authors one of the most resistant organs of the body to infection. There are several anatomical and physiological reasons for this supposition. The gland is deeply seated in the anterior part of the neck, protected from external injury by muscles and fascia. Anteriorly it is overlaid by the sternothyroid, sternohyoid, and platysma muscles; on either side are the sternocleidal muscles. A heavy capsule is formed by the fusion of the superficial layers and pretracheal layer of the deep cervical fascia. This is continued down the neck, into the thorax and becomes continuous with the fibrous layer of the pericardium. The deep fascia tends to protect from invasion by infection in the contiguous structures. The infection is confined to its facial compartments and travels up and down but not through the fibrous columns.

In cases where the thyroglossal duct is persistent, the possibilities of infection is greater than in those cases where the duct is obliterated.

The thyroid gland is a very vascular organ receiving its arterial blood from the large superior and inferior thyroid arteries, while its venous return is through the superior, middle and inferior veins. Within the gland itself is a mesh-work of minute capillaries supported on a fine fibroelastic stroma. The lymph drainage is unusually free.

The secretion of the thyroid gland enters the general circulation either through the lymphatics or blood capillaries. Some men are of the opinion that this secretion has germicidal properties.[2] During puberty, pregnancy, menstruation and severe fevers, there is a physiological increase together with anatomical changes which make the gland more susceptible to infection. Adenomata frequently form which are the sites of fibrosis and abnormal cell proliferation. Blood vessels become distorted and frequent hemorrhages occur, all of which produce areas of lowered resistance.

The rich blood supply acts as a two way valve, in that it tends to prevent infection as well as cause it. The hormone tends to prevent infection, while the physiological changes, which occur, tend to lower the resistance. The plus and minus factors are equalized making the susceptibility of the gland low.

Pathology.—Inflammations of the thyroid gland may be classified into suppurative and non-suppurative and acute, subacute and chronic thyroiditis. Acute thyroiditis may subside by resolution or it may go on to suppuration or gangrene and form one or more abscesses. The right lobe is more frequently involved than the left one.

The pathological process does not differ from an abscess any place else in the body. There may be multiple miliary abscesses or large pus pockets involving one or both lobes of the thyroid gland. In the center of the abscess great masses of bacteria are often found. Streptococci and staphylococci are the most

common bacteria isolated, but B. Coli, B. Typhosus, Pneumococci and Paratyphosus A. & B. have been found. This infection is usually a pure one, but mixed infections have been recorded.[10]

Symptoms.—In acute suppurative thyroiditis there is a sudden onset of severe constitutional disturbances, such as chills, high temperature, general malaise and marked prostration. The pain is very severe and may be referred to adjacent regions in the neck before becoming localized in the thyroid gland. It is soon accompanied by dyspnea, hoarseness, dysphagia, sweats, exhaustion and evidences of local inflammation such as tumefaction of the gland with areas of redness, soreness and fluctuation over the thyroid gland which may become very firm, fixed and extremely tender. This may be localized in one lobe or involve the entire gland. Frank Lahey called attention to two important signs of acute thyroiditis namely; 1. flexion of the head with limitation of chin elevation, as any attempt at extension causes pressure on the thyroid gland by the muscles covering it, and 2. the depression of the chin on the sternum when swallowing. This is caused by the action of the sternohyoid, sternothyroid, and the omohyoid muscles on the abscess beneath them. If the abscess is allowed to advance the symptoms become more severe, the gland softens, and the tissues become edematous and necrotic. The abscess may rupture spontaneously if not drained surgically. More frequently the pus advances along the fascial compartments causing intrathoracic complications.

Prognosis.—The prognosis is good and recovery is usually complete, and ensues rapidly if proper treatment is instituted early. If neglected the abscess may spread and perforate into the mediastinum, trachea, esophagus and thoracic cavity. In some cases thyrotoxicosis or post-operative myxedema may cause exhaustion of the patient. The mortality in these cases is very low. According to Hogensnech, the mortality is less than 2%.

Differential Diagnosis.—The diagnosis of acute suppurative thyroiditis is made by the characteristic signs and symptoms based on a history of primary focus of infection and severe constitutional symptoms, such as high fever, general malaise and increasing severe pain from the beginning.

In hemorrhages into thyroid adenoma, there is a history of sudden exertion followed by sudden severe pain in the thyroid region which subsides rapidly while the gland increases in size. There are no severe constitutional symptoms.

Cellulitis of the neck may resemble a far advanced thyroiditis. However, in the former, there is little pain at the onset; there are no thyrotoxic symptoms; and the swelling usually begins in the floor of the mouth and advances downwards into the neck instead of beginning in the region of the thyroid as in thyroiditis.

In physiological hypertrophy of the thyroid, there is an absence of pain, fever, or tenderness and it occurs during periods of stress, such as menstruation, pregnancy and at puberty.

Branchial and thyroglossal cysts may be confused with thyroiditis where hemorrhage or infection of their contents occur. These are usually differentiated by their location cephalad to the thyroid gland, and may be recognized early before symptoms of acute inflammation occur.

Perichondritis of the trachea or of the thyroid cartilage may cause pain and tenderness in the thyroid region accompanied by dyspnea and coughing. The symptoms are usually predominantly laryngeal and the diagnosis may be confirmed by a laryngoscopic examination.

TREATMENT

Acute suppurative thyroiditis calls for incision and drainage. If the abscesses are mutiple, subtotal thyroidectomy is the best procedure.

Gilman advises the following procedure. He uses general anesthesia. A needle is inserted into the fluctuating area and pus is withdrawn. The incision is then carried along the needle before it is withdrawn. The opening is stretched by means of curved clamps, the pus is evacuated, and the cavity is explored by the finger. Rubber tubes are then inserted into both lobes to provide for good drainage.

Clute advises the collar incision in abcesses of the thyroid. This incision is made transversely through the skin and platysma muscles. The intermuscular fascia is split longitudinally and the sternohyoid and sternothyroid muscles retracted laterally on either side until the inflamed gland is exposed. Lahey recommends the severing of the ribbon muscles to promote

drainage. The cavity is opened widely and sponged out. Clute is of the opinion that curetting of the walls is contraindicated because the blood vessels may be opened and serious hemorrhage result. Drainage should be established by means of a good sized hard rubber tube. To insure free drainage from the most remote areas after collapse of the abscess walls, mutiple perforations may be cut along the sides of the tube and this split part of its length; the two split pieces being separated when the tube is placed, one tube going to each pole of the infected lobe.

All cases of suppurative thyroiditis must be followed up closely for signs of hypothyroidism. This complication is dependent upon the amount of destruction to the gland at the time of the infection.

Case 1. A white child, aged 3 years, was first seen by me on April 28, 1932, presenting the following history: The child had been very well until three days prior to my seeing her when she became very irritable and acted abnormally. The day previous, the father noticed a swelling of the neck and the child complained of pain about the neck. I found an elevation of temperature, swollen indurated region over thyroid gland, and the child was having chills and feeling very uncomfortable. I was unable to obtain a history of any previous infection or illness. The swelling of the neck increased, and fluctuation was noted. These symptoms and findings made me suspect an abscess of the thyroid gland. I recommended hospitalization and incision of gland.

A transverse incision was made over the thyroid gland. The intermuscular fascia split longitudinally and the sternohyoid and sternothyroid muscles retracted laterally. This exposed an inflamed fluctuating area over the right and middle lobes. This was opened and twenty to thirty cc. of free pus removed. Cultures from same showed a streptococcic infection. Rubber drains were inserted, incision closed and child sent to bed. Within two days, she was able to leave the hospital entirely recovered.

I have seen the child several times since the operation, and she appears to be in very good health.

CONCLUSION

Primary suppurative thyroiditis is rare. Usually it is secondary to thyroiditis or infection elsewhere.

Diagnosis of thyroid abscess is made by symptoms of an acute infection and typical findings in region of thyroid gland.

Treatment is incision and drainage of gland.

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TUBERCULOSIS IN CHILDHOOD*

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The importance of tuberculosis in childhood is evident from the mortality statistics. Thus in the year 1930 tuberculosis (all forms) has killed in the State of Illinois in the age groups under 15, 297 children, i. e., more than any of the other common infectious diseases of childhood except diphtheria. (Table No. 1.)

TABLE 1.
MORTALITY STATISTICS
STATE OF ILLINOIS YEAR 1930

Title	Downstate			Chicago			Total
	Under 1-4	5-9	10-14	Under 1-4	5-9	10-14	Under 1-14
Tuberculosis All Forms	55	18	33	107	44	40	297
Diphtheria	57	45	12	183	168	28	493
Scarlet Fever	44	26	9	82	73	10	244
Whooping Cough	124	2	0	53	2	0	181
Measles	46	14	5	7	0	0	72

*From the Peoria Municipal Tuberculosis Sanitarium.

*Read before Section on Medicine, Illnois State Medical Society, Springfield, May 19, 1932.

PULMONARY TUBERCULOSIS

Pulmonary tuberculosis in childhood manifests itself in the following forms:

1. Acute miliary, as part of generalized acute miliary tuberculosis;
2. Caseous pneumonia, or bronchopnuemonia;
3. The juvenile type, or childhood tuberculosis according to the designation of the National Tuberculosis Association;
4. The adult type.

The designation of the first two types is descriptive enough not to need further elucidation.

The characteristic lesions of the juvenile type are the primary focus, usually at the base of the lung and the involvement of the hilum, and the tracheobronchial lymphnodes.

In the adult type the lung parenchyma proper is involved to a greater or lesser degree. Cavitations are not infrequent.

Clinically, the disease especially in its early stage is more often than not of the latent type, i. e., neither subjective symptoms are observed, nor can any physical signs be elicited.

It has to be borne in mind that malnutrition is not a characteristic symptom of tuberculosis. Chadwick and Zacks,[2] Hetherington[3] and others have convincingly proven that tuberculosis is just as frequent among the well nourished and overweight children as it is among the undernourished. They have also shown that the disease is not more prevalent among the undernourished children than among those of normal weight.

Pulmonary tuberculosis occurs in children who have been or are in a more or less close contact with a case of open tuberculosis. In families where an adult member suffers from open pulmonary tuberculosis we usually find some of the children infected. Outside of the family, the school and the playmates will very often provide the contact.

During the past 15 months we have tuberculin tested in our Chest Clinic 276 children under the age of 16; 164 contact cases and 112 non-contacts. In this group we have found 44.51% reactors among the contacts, and only 17.14% among the non-contacts.

The disease being latent in its earlier course it is obvious that neither will the child have any particular complaints, nor will the parents find any reason for seeking medical aid. This fact in itself explains the common experience that by the time medical aid is sought the disease is usually in the advanced stage and the patient very often in a condition when medical aid is of no avail.

In this connection it has to be emphasized that chronic pulmonary tuberculosis has an unusually long incubation period covering often years and that the latent period is long drawn out lasting for a considerable length of time.

It is obvious to students of the subject that the fountain head of tuberculosis of the adult (Krause) has to be sought in tuberculosis of childhood. In this light, tuberculosis of childhood receives an added significance. It is evident that tuberculosis of the adult can be eradicated only by finding the latent cases in childhood.

In the teen ages pulmonary tuberculosis is still the chief cause of death. Among the five leading causes of death in the state of Illinois during the year 1930 pulmonary tuberculosis was heading the list with 285 deaths followed far behind on the second place by automobile accidents with 144 deaths. (Table No. 2.) During the same year and in the same age group the number of deaths from all causes was 1659. Thus 17.40% of all deaths in this age group was caused by pulmonary tuberculosis.

TABLE 2.
MORTALITY STATISTICS
STATE OF ILLINOIS
AGE GROUP 15-19, YEAR 1930

	Down-state	Chicago	Total
Pulmonary Tuberculosis	124	161	285
Auto Accidents	100	44	144
Diseases of circulatory system	57	83	140
Appendicitis	66	49	115
Lobar Pneumonia	44	23	67

Diagnosis. The latent nature of the disease makes physical examination of no reliance. It makes it also imperative that the diseased children shall be sought for among those who are apparently healthy.

As yet the combined use of the tuberculin test and the x-ray has been proven the only satisfactory method by which latent tubercu-

losis among the apparently healthy children can be successfully detected.

Investigators agree that the intradermal or Manteaux test is far superior in regard to reliability and accuracy to the original percutaneous test of von Pirquet. Those who are in favor of the von Pirquet test are so, because in general parents object perhaps less to a scratch on their children's arm than to injections. In the work of our Chest Clinic we use the intradermal test and have found no objections against its use. The children tolerate it well and only occasionally do we have trouble in applying the test to a child who is scared from the needle or the doctor. Perhaps the fact that the clientele of the Clinic is more or less familiar with the dangers of the disease accounts for the cooperation of the parents.

We are using for the test a solution of old tuberculin in the proportion of 1:10,000, or 1:1,000, injecting with a tuberculin syringe 0.10 cc. into the skin. Only in rare instances do we use the solution in the concentration of 1:100. It has to be emphasized that the solution should be freshly prepared, because it deteriorates even in days. It is preferable that the strength and reliability of the stock solution should be tested on individuals of known reaction, or on tuberculous guinea pigs. We believe, however, that when the test is used simultaneously on a large number of cases, the fact that some children will react to the test and others not, will in itself speak for the reliability of the solution.

Having found the positive reactors, a radiogram of these children will show the nature of their involvement. The radiograms will vary. They will show a picture of no appreciable pathological changes, or a primary calcified focus with slight to considerable involvement of the hilum or tracheobronchial lymphnodes, or slight parenchymal changes to massive involvement of the parenchyma.

We believe that no matter how much information can be gained from a properly prepared radiogram in regard to the picture of lung lesions, the nature of these lesions especially when the involvement is not extensive and where there is no sputum, or where the sputum is negative, can be cleared up satisfactorily only by the use of the tuberculin test. It cannot be forgotten that beside tuberculosis, other diseases also cause pathological changes in the lung, and that the x-ray appearance is not always characteristic enough for a reliable differential diagnosis.

In this connection it has also to be emphasized that whenever sputum is raised, even if tuberculosis is not suspected, the sputum shall be carefully and repeatedly examined for tubercle bacilli. We see it only too often that this elementary measure is neglected. It has been our experience that the life of many a patient could have been saved, or that many would have received appropriate treatment in the earlier stage of their disease had the sputum been examined at the time when these patients were first seen by their doctor.

In children who do not expectorate, the swab slide method as described by Szucs will often reveal a positive sputum. According to this method a sterile cotton plug on an applicator is introduced into the child's pharynx, the pharynx irritated until the child coughs, and from the material brought up to the plug a slide prepared which is then examined by the routine method.

Our search for tuberculous children will be the most fruitful by systematically examining all the members of the households where tuberculosis has occurred. This procedure is routinely followed by most tuberculosis clinics and dispensaries. The systematic tuberculin testing of all the school children has been most extensively carried out by the State of Massachusetts and many communities. To these examinations the objections of the parents against the use of the tuberculin test is the greatest obstacle. This handicap can be overcome only by the continuous education of the general public. In many instances the cost of the x-ray films makes such surveys prohibitive. It has to be hoped that the use of the paper films as exhibited at this meeting by the National Tuberculosis Association will overcome this handicap.

Treatment. In regard to treatment, Opie, McPhedran and Hetherington[4] have laid down some basic rules which should be followed.

These rules are as follows:

"Sanatorium care, or its equivalent is necessary for 1. Pulmonary tuberculosis with symptoms or physical signs of activity. 2. Non-pulmonary tuberculosis with symptoms, or physical signs of activity. 3. Latent apical tuberculosis, or latent tuberculous infiltration elsewhere in the lung, that has the appearance of recent activity

or can be shown to be progressive by roentgenological examination. 4. Tuberculosis of tracheobronchial lymphnodes, the roentgenological demonstration of which is dependent ón massive enlargement and not on calcium deposition.

"Preventorium or open-air school is suitable for the following types of infection: 1. Inactive manifest pulmonary tuberculosis. Any symptoms that are present are trivial, and the sputum if there is any, must be negative on repeated direct examinations and on guinea pig inoculation. 2. Latent apical tuberculosis, or latent tuberculous infiltration elsewhere in the lung, provided the lesion has no appearance of recent activity and is not progressing. 3. Nonpulmonary tuberculosis that cannot be shown to be progressing. 4. Pleural thickening thought to be tuberculous, in some cases the result of pleural effusion. 5. Roentgenologically demonstrable tuberculosis of tracheobronchial lymphnodes, partly calcified."

Cases of the adult type should undergo the same kind of treatment as the adults do. It cannot be emphasized strongly enough that beside the usual sanatorium regimen surgical measures as artificial pneumothorax phrenicotomy, etc., should be resorted to whenever indication for such procedures exist.

Air baths have proven of distinctly beneficial value in all forms of the disease. Sunbaths, natural and artificial, have a distinct value in the childhood type, but should be used with the greatest care and precaution and only in selected cases of the adult type.

As a matter of occupational therapy and in order to prevent loss of time in their studies and to keep up their work habits, the children shall be given instruction in their school subjects. Ambulant children can well attend classroom instruction. Those who have to stay steadily in bed can be instructed by their teacher at the bedside.

CASE REPORTS

Case 1. W. A., white, Syrian, aged 12 years, admitted to the Sanitarium on April 22, 1929.

Family History: Her sister was suffering from open pulmonary tuberculosis and was cared for in a sanatorium in New York State. (She died since.)

Present Illness: For four months she was coughing and expectorating and losing weight and was febrile. Had hemoptysis of considerable amount three months previous to admission. She went to school until four months prior to admission.

Physical and x-ray examination (Fig. 1) revealed far advanced chronic pulmonary tuberculosis with involvement of both sides, subacute endocarditis and badly infected tonsils.

The sputum was positive for tubercle bacilli. The temperature was ranging to 101-102 in the afternoons.

After 1 year of routine sanatorium care her condition was stationary and the prognosis was rather poor.

With the idea that by removing a focus of massive infection, her condition might somewhat improve, a tonsillectomy under local anesthesia was performed on June 14, 1930.

After the tonsillectomy soon the temperature became normal, the heart murmurs less pronounced and less harsh, the rales in the lungs less numerous and less moist, the sputum became negative and later on cough and expectoration was of very slight degree. However, the scant sputum specimen was proven positive on guinea pig inoculation on December 1, 1930.

Her condition apparently improved steadily when on September 29, 1931, and the day following she spat repeatedly considerable amount of blood and the hemoptysis seemed to be uncontrollable by the routine medical procedures. Physical examination revealed large consonant rales in an area of a silver dollar below the left clavicle and the radiogram showed faint signs of softening in the same area. Artificial pneumothorax on the left was, therefore, resorted to and the attempt was



Fig. 1. Case No. 1.



Fig. 2. Case No. 1.



Fig. 3. Case No. 2.

successful. The sputum cleared up in a short time and the patient is again improving. She is still under artificial pneumothorax treatment (Fig. 2). Her physical appearance is excellent and she is giving the impression of a healthy girl.

Case 2. A. A., white, Syrian, aged 12 years admitted to the Sanitarium May 29, 1931. Sister of the previous case. She looked apparently healthy and well nourished. She had no complaints and went to school regularly. Only through the persistent visits and persuasions of the Clinic nurse were we able to secure finally an examination at the Clinic.

Physical and x-ray examination (Fig. 3) revealed a cavity of the size of a quarter in the left base. The sputum was positive for tubercle bacilli. Temperature was normal.

The cavity being in the base, phrenicotomy was resorted to on June 10, 1931. The routine sputum examination the month following still revealed the tubercle bacilli. The sputum, however, was negative in August and September. Since October, 1931, patient does not expectorate. Nevertheless serial x-ray films have shown that although the phrenicotomy was successful the cavity increased in size (Fig. 4). Artificial pneumothorax was, therefore, resorted to on November 12, 1931 and is successfully carried on since. Subsequent serial radiograms have shown the cavity constantly decreasing in size while the last one of April 16, 1932 shows it to be obliterated (Fig. 5).

Case 3. R. B., white, aged 13 years, admitted to the Sanitarium September 17, 1930.

She stated that she was coughing and expectorating and losing weight since June, 1928, and that in the same hosehold with her a man lived for a short time who had tuberculosis. In 1929 she was under the care of a tuberculosis specialist who discharged her from under his care as non-tuberculous. She went to school till a few days before her admission.

Physical and x-ray examinations (Fig. 6) revealed far advanced chronic pulmonary tuberculosis of the disseminated type throughtout all lobes and large honeycomb cavitations in the right upper lobe. Notwithstanding strict bed rest these cavities have increased in size as shown in the serial x-ray pictures. On June 3, 1931, therefore, a phrenicotomy on the right was resorted to. Although the phrenicotomy was fairly successful the



Fig. 4. Case No. 2.



Fig. 5. Case No. 2.



Fig. 6. Case No. 3.



Fig. 7. Case No. 3.



Fig. 8. Case No. 4.



Fig. 9. Case No. 4.

condition of the patient is stationary and serial x-ray films (Fig. 7) show that the cavities are increasing in size.

This girl's sister aged 17 was for a short time also a patient of the Sanitarium. She had a solitary cavity in the right base and positive sputum. She however, left the Sanitarium against advice, and shortly afterwards died of lobar pneumonia.

Considering the history and the extent of the disease in these two cases, it is our belief that the older girl contracted tuberculosis from her younger sister.

Case 4. D. E., white, aged 14 years, admitted June 9, 1930.

Family History: Father and mother died of tuberculosis in the year 1927.

She stated that she was coughing and expectorating and had positive sputum since the end of the year 1928, that is from the age of 12. She was under the care of a tuberculosis specialist in the first half of the year 1929, who discharged her as arrested, although her sputum was still positive.

Physical and x-ray examination revealed far advanced pulmonary tuberculosis involving all lobes left and right upper lobe, with a cavity in the right apex. The sputum was positive for tubercle bacilli, temperature ranging to 101.

On July 7, 1930, she developed a partial spontaneous pneumothorax involving the left upper lobe (Fig. 8). A few days after that she developed a pleural effusion on the left side, the fluid filling out nearly the whole pleural cavity. The pleural cavity was aspirated and the fluid replaced by air and a hydropneumothorax established and maintained.

From August 9, 1930, her temperature became normal and she seemed to be steadily improving.

At no time were we able to find, beside the tubercle bacilli, other microorganisms, even on culture, in the pleural fluid. Nevertheless slowly an empyema developed. We resorted, therefore, to a phrenicotomy on April 1, 1931.

The empyema, however, increased in severity and she developed also a bronchial fistula.

Since December 26, 1931, we are having her under an oleothorax (Fig. 9). For a few weeks she expectorated occasionally traces of the oil. But for months now no oil is expectorated and the amount of sputum has considerably decreased. We believe therefore, that the fistula has closed. Aspirations, however, are necessary rather frequently to relieve dyspnea and other distressing symptoms. The pleural fluid is still sterile.

Physical examinations and serial x-ray films reveal a progressive process also in the right apex. But the patient feels fairly comfortable in bed.

EXTRAPULMONARY TUBERCULOSIS

One used to the prevalence of bone, joint, cervical and peritoneal tuberculosis on the continent is deeply impressed with the scarcity of these forms in this country. One cannot escape the conviction that the care given to the milk supply in this country is chiefly responsible for the rare occurrence and that the efforts in providing safe milk for human consumption are well repaid.

In regard to treatment of these forms one who has visited the institution of Rollier in Leysen, Switzerland, is lastingly impressed by the results achieved by heliotherapy and conservative orthopedic measures.

It has to be admitted, however, that for social and other reasons the more radical surgical measures have their definite indications and place in our armamentarium.

In tuberculous meningitis and miliary tuberculosis still only symptomatic treatment is at our disposal.

SUMMARY

1. The chief characteristic of pulmonary tuberculosis in childhood is the latency of the disease. Therefore, only the systematic examinations of the apparently healthy children will lead to the finding of cases in the early stage of the disease.

2. Tuberculin test and radiograms combined are essential in the diagnosis.

3. Airbaths and heliotherapy (sun and artificial) are beneficial in the treatment of the juvenile type.

4. In the adult type surgical treatment (artificial pneumothorax, phrenicotomy, etc.) shall be resorted to whenever the involvement is advanced.

REFERENCES

1. The mortality statistics have been compiled from the official statistics of the Illinois State Department of Public Health, published in the Illinois Health Quarterly, New Series ,Vol. III No. 4.

2. Chadwick, H. D., and Zacks, D.: Jour. A. M. A., 1927, XXXIX, 670.

3. Hetherington, H. W.: Amer. Rev. Tuberc., 1927, XVI, 459.

4. Hetherington, H. W.: Amer. Rev. Tuberc. 1929, XX, 518.

DISCUSSION

Dr. Hermon H. Cole, Springfield: I think that Dr. Pollak has hit the nail smack on the head in this paper, and there is so much that I would like to discuss that it would take the rest of the day. I am going to mention only a very few things.

Dr. Pollak looks at this situation very much, I think, from the standpoint of the child; I look at it from the standpoint of tuberculosis from infancy to old age and as a part of the group which I am seeing.

Unquestionably, tuberculosis, and I think that everybody agrees with this, is still the most serious disease of children and young adult life. I agree with him thoroughly that the diagnosis of childhood tuberculosis is a very difficult matter. I know that in the whole field I do not have nearly as much difficulty with adults and young adults as I do with children. I admit that I am very deficient many times in my diagnostic ability.

I have missed a lot of them that I rather hate to admit and have had them come back later and I found that I missed them the first time.

Certainly it is a very common thing with me to have children report several times, much more often than I do with adults.

I agree thoroughly that the appearance of the child is not any reliable criterion as to the manner of tuberculous infection. Many times in examining our clinic people we find that the children who look the best in the family have the most widespread infection. It is also true over the last twelve years that I have been connected with the Springfield Tuberculosis Clinic that our reactors and our definite tuberculous children in tuberculous families will run approximately 3 to 1 with those children who are not so closely associated or in contact with those tuberculous cases. Certainly it is true that in tuberculous families if you find one case you should go through the rest of the family. We have found, particularly in our clinic where it is easily possible to do it, that there are usually more than one case of tuberculosis in the family; almost invariably there are several cases that can be uncovered.

I want to say a particular word about tuberculous glands. Ten years ago we had great numbers of these in our clinics. We saw a good many of them in the office. Today they are becoming a rarity. I am speaking now of tuberculous glands of the neck. I am wondering if it is not possible that the nose and throat men have inadvertently done the tuberculosis men a considerable amount of good by the early removal of tonsils, and I am wondering if some of the lowered mortality that we are getting in adult tuberculosis at the present time has not been due to the fact that the children who, ten, fifteen, or twenty years ago, had tuberculous glands and tonsils were beginning to have those things removed, and at the present time we are having an adult class in which that amount of tuberculous infection has been taken away. I know that there are many men who disagree with that, but I personally believe that it is true. Certainly a tuberculous glandular infection in the neck in our clinic is much rarer than it used to be. We are not getting nearly as many as we did.

In a certain percentage of adults we can inject lipiodol into the lung without an anesthetic and I see no reason why it is not perfectly possible that children with upper respiratory infections, particularly tonsils or tuberculosis of the middle ear or sinuses, cannot in fect their own lungs in that same manner. They do not, as a rule, cough like the adults do, the cough is not as acute; and I think that it is possible that a good deal of our tuberculous lung infection comes in that manner.

There is another method of transmission of tuberculosis which I have long been carrying in the back of my mind and which I have heard very little about in the literature. The whole pathway is not entirely worked out, and I would like to have some of the men who are doing work along this line think about it a little bit, and I hope that Dr. Pollak will answer a question for me. I would like to know what his opinion is.

Some years ago when I was a student at Ann Arbor, Dr. Van Zwaluwenburg was doing work on apical pleuritis. He was trying to find an entrance of pleuritis, in all his groups from infancy to old age, down the neck. Since that time I have been carrying around in the back of my mind the possibility that with tuberculous tonsils, tuberculous glands of the neck, there might be a transference down the neck. I realize that that pathway has not been shown; but a transference downward by way of the lymphatics to the cervical pleura, from there into the dead space and the hilus of the lung, as a possible new third pathway, especially in children, is a possibility on which I would like to know Dr. Pollak's opinion.

I agree thoroughly that if you eliminate the childhood tuberculosis, or at least reduce it very markedly, you certainly will take care of a great deal of adult tuberculosis.

Just a word about surgery in children. I have not been privileged to do a great deal of surgery on childhood tuberculosis. Of those that I have done I feel this way about it: I do not like pneumothorax very well in children. Most of those that I have done have been between 10 and 16, and they have not done particularly well. They have not done as well as adults with similar symptoms of disease and a similar type. Possibly the tendency to scar formation is not as good, or the tendency to fibrosis is not as strong. Certainly the mediastinum is more flexible.

I believe that tuberculosis in childhood is remarkably well tolerated. I think in the great majority of cases, given an equal amount of childhood tuberculosis as compared with an equal amount of adult tuberculosis, though the types are different, the evidence is in favor of the child; I think that the child will do better, will carry an equal load better than a similar load carried by an adult. I believe the Phrenic operation is not as often used in children as it should be. I am not radical on the subject at all, but I believe that it is more conservative surgery than pneumothorax and should be used more often. It does not preclude the possibility of doing a pneumothorax later, if necessary, and I believe that it will give safer and better results with less disturbance to the children.

I appreciate very much this paper, and I thank the Doctor for allowing me to discusss it.

Dr. Sumner N. Miller, Peoria: I have had the opportunity of watching Dr. Pollak's work very closely and there are two or three striking things that are worth while emphasizing.

One is that the adult type does occur in children and in children of school age who are disseminating the disease in the schools, and that identification of these cases will be a major factor in controlling the spread of the disease.

The second is this: That much of adult tuberculosis is due to the childhood type of tuberculosis which remains latent until adult life and that the future line of endeavor in the eradication of adult tuberculosis will lie in the identification of the childhood type and in the adoption of appropriate measures to stamp out and cure the disease during the childhood period when it is easily amenable to treatment.

Dr. M. Pollak, Peoria (Closing discussion): I am very grateful to Dr. Cole for his discussion and especially for a few points that he brought out. In regard

to glandular tuberculosis, I wish to say that to me, who has been brought up abroad and who knows the conditions abroad quite well, it was very surprising to see how few cases of glandular and bone and joint tuberculosis we see in this country. It is generally agreed that these cases are caused by bovine infection. I believe that the scarcity of these cases in this country can be accounted for by the fact that we are paying quite a great deal of attention to our milk problem and our cattle. I have spoken on the subject to Dr. Petroff at Saranac Lake who has had similar experiences and his opinion is the same.

In regard to the upper respiratory infections of the sinuses and tonsils, causing pulmonary involvement, I thoroughly agree with Dr. Cole. And that is the reason that I did emphasize that x-ray pictures alone are not entirely satisfactory in diagnosing childhood tuberculosis. That is the reason why we have to use both the radiogram and the tuberculin test. The radiogram will show the lung involvement and the tuberculin test will clarify the etiology, keeping in mind that in vary rare instances the tuberculin test might be negative in cases of tuberculosis.

In regard to the rout of infection leading from the tonsils into the lungs, as Dr. Cole has mentioned, I think in certain instances he is right in that. I have seen a few cases in which we found the glands of the neck calcified and calcified areas in the apex which would point to that road of infection.

In regard to surgery in the child, I agree with Dr. Cole on the fact that artificial pneumothorax is far more dangerous than phrenicotomy. A pleural effusion complicating artificial pneumothorax, which in a certain number of cases becomes an empyema, is not a welcome complication. However, in my opinion, artificial pneumothorax should be applied in upper lobe involvements, and phrenicotomy in basal involvements. As I have shown in one of my cases, we resorted first to phrenicotomy and only after our attempt was unsuccessful and the basal cavity became larger instead of smaller after phrenicotomy, did we resort to artificial pneumothorax. However, our routine is that in every instance where artificial pneumothorax cannot be given we always resort to phrenicotomy, even in apical lesions, and we have seen quite a number of marked improvements in apical cavities and upper lobe involvements from phrenicotomy alone.

I thank you.

GOOD ADVICE

"You must give up staying out late at night," said the doctor.

"You think the night air is bad for me, doctor?"

"No," said the doctor, "it isn't that. It's the excitement after getting home that harms you."

WHY WORRY

An old lady approached a ship's officer on a dirty night. "Oh, I feel dreadfully ill," she moaned, "what do you think I should do?" "Don't let that worry you," replied the callous sailor, "you will do it anyway."

IN THE NURSERY

(With Apologies to Gluyas Williams)

First Newborn: So this is America!

Second Newborn: Yeh! How do you like it?

F. N.: Not bad, not bad. When did you get in?

S. N.: About an hour ago; my train was late. I came in on the Perineal Limited. Fast train, only took me four hours.

F. N.: You made good time. I came in on the Amniotic Express. We got stuck about two hours out. Yeh; had a washout over my head.

S. N.: Wassamatter?

F. N.: Somebody hit me on the head with a steel blade as I was trying to get through the vestibule of the train. Sore as 'ell, too!

S. N.: Tough! Who's your Daddy?

F. N.: Dunno yet; he hasn't been around. My mother didn't seem too keen about me. Said I looked funny and had a pug nose. Can you imagine that? Well, you never can satisfy a woman. I'm here to stay.

S. N.: You tell 'em! How'd you like this joint? Kinda nifty, eh?

F. N.: Oh, not so bad. Wish the gang would keep quiet a minute so a fellow could grab off a little sleep. Gosh! Listen to that yap next to me!

S. N.: Ain't it the truth? What are you eating these days?

F. N.: Breast milk. I take mine straight. How about you?

S. N.: Bootleg, kid; the old lady's as dry as the Sahara.

F. N.: The 'ell you say!

S. N.: Yeh! Stuff ain't bad—kinda weak, though. Well, I'm lucky to get that.

F. N.: Ho, hum. Great life, ain't it, kid?

S. N.: Well, the first six months are the hardest. Cheer up, partner. Wait'll you get your teeth.

F. N.: O Boy! I can taste the zwiebac now. Well, time flies. Guess I'll turn in for a nap. See you later. Cheerro!

S. N.: Don't take any cast iron nipples. Toot sweet, old top.

Infant jabber as translated by a few of our fourth and fifth floor nurses.—*Edgewater Hospital Staff News.*

LARGE NUMBERS OF PROFESSIONAL MEN ARE ON THE AUSTRALIAN DOLE

Workless men and women in Australia are contentedly "nesting down on the dole."

The problem of this workless army, apparently content to be unemployed for life, is causing such concern in political circles that Joseph Lyons, prime minister, summoned a conference of the heads of all Australian states.

Large numbers of professional men are now "on the dole," and it is reported that they make ends meet and find the absence of worry an agreeable experience.

PATRIOTISM

A real patriot is the man who whistled "The Star Spangled Banner" while making out his income tax.

Society Proceedings

COOK COUNTY

CHICAGO MEDICAL SOCIETY

General Practitioner's Night, February 1, 1933

ABDOMINAL EMERGENCIES FROM THE STANDPOINT OF THE GENERAL PRACTITIONER

Abdominal Emergencies (Non-Traumatic) ..... Roger T. Vaughan

Abdominal Emergencies Dealing Especially with Abdominal Injuries ..... George G. Davis

Abdominal Emergencies in Infancy and Childhood ..... Edwin M. Miller

Abdominal Emergencies, Dealing with the Gynecological Phase ..... Harold O. Jones

Discussion ..... William Cubbins, Harry E. Mock, Dr. Gatewood, F. H. Falls, Robert Black, Joseph Brennemann

Regular Meeting, Wednesday, February 8, 1933

MEDICAL LEGISLATION

1. The Physician and the Law.
   Harry Eugene Kelly
2. Medical Organization and Legislation.
   Thomas P. Foley, Chairman Legislative Committee, Chicago Medical Society
3. Legislative Problems.
   John R. Neal, President, Illinois State Medical Society

Regular Meeting, Wednesday, February 15, 1933

PROGRAM SPONSORED BY

Rush Medical College and the University of Chicago

Everyday Knee Injuries, Excluding Fracture—Diagnosis and Treatment ..... Kellogg Speed

Tuberculosis and Pregnancy ..... Fred L. Adair

The Diagnostic Value of Roentgenograms of the Epiphyses of Growing Bones ..... Arthur H. Parmelee

The Sympathetic Nervous System and Skin Diseases ..... Samuel W. Becker

Regular Meeting, Wednesday, March 1, 1933

PROGRAM

Surgical Treatment of Tuberculosis .... Carl A. Hedblom

Evaluation of the Surgical Risk .... William R. McNealy

Deferred Operation in the Treatment of Periappendicular Abscess ..... Karl Meyer

Discussion ..... Ralph Bettman, Benjamin Goldberg, William Cubbins, N. M. Percy

Personals

Dr. Frank Smithies was recently awarded the cross of the French Legion of Honor; the presentation was made by the French consul in the name of the president of France.

Dr. Henry R. Jacobs has been appointed an assistant in the department of medicine, Division of Biological Sciences, University of Chicago.

The first Jessie Horton Koessler Fellowship of the Institute of Medicine of Chicago for the aid of research in biochemistry, physiology, bacteriology or pathology has been awarded for one year to Dr. Arthur D. Bissell.

Dr. Harold O. Jones, Chicago, addressed the Will-Grundy County Medical Society, February 22, on "Treatment of Pelvic Infections." A film on "Salpingectomy and high Fundic Amputation for Residues of Tubal Disease" was also shown.

Dr. Lewis R. Hill has been appointed professor of bacteriology at Loyola University School of Medicine, succeeding Dr. Emil Weiss, who resigned because of ill health. Dr. Jacob P. Greenhill was recently appointed associate professor of gynecology at Loyola.

Dr. Harvey J. Howard recently resigned the professorship of ophthalmology in the Medical School, Washington University, Saint Louis, in order to open a private office in the Park Plaza Hotel, Kingshighway and Maryland Avenue, Saint Louis, Missouri.

Dr. Erwin P. Zeisler, Chicago, spoke on "Malignant New-Growths of The Skin," at Janesville, Wisconsin, on February 28.

The newly elected officers of the Chicago Dermatological Society are as follows: President, Oliver S. Ormsby; Vice-President, James H. Mitchell, and Secretary, Max S. Wien.

Dr. Max Thorek addressed the Muncie Academy of Medicine at Muncie, Indiana, February 7, 1933, on "Plastic Surgery from the General Surgeon's Point of View."

Dr. Harrison S. Martland, chief medical examiner for Essex County, New Jersey, delivered the ninth Ludvig Hektoen Lecture of the Institute of Medicine of Chicago, February 24, 1933. His subject was "Recent Progress in the Medicolegal Field in the United States."

Dr. William Allen Pusey, emeritus professor of dermatology, University of Illinois College of Medicine, will deliver the Adolph Gehrmann Memorial Lectures at the Research and Educational Hospital of the college, March 1-3, on "History and Epidemiology of Syphilis." The subtitles of the lectures will be "History of Syphilis," "Development of Knowledge of

Syphilis'' and Epidemiology of Syphilis.'' A dinner in honor of Dr. Pusey has been arranged by the university, to be given at the Palmer House, March 2.

Dr. J. P. Greenhill read a paper before the St. Joseph County Medical Society, at South Bend, Indiana, on ''Recent Progress in Obstetrics and Gynecology'' February 16. He also showed a motion picture film on ''Breech Presentation.''

News Notes

—S. 241 and H. 298 propose to create a medical center in Chicago and to authorize a medical center commission of three members to acquire title to lands in the designed territory. S. 238 proposes to levy a tax equal to 1 per cent of the gross receipts derived from the practice of any profession or occupation.

—H. 225 proposes that all contracts of companies doing business in Illinois, insuring against bodily injury, disablement or financial loss, resulting from accidents, shall authorize the insurer to pay all claims of hospitals and physicians directly to them instead of to the injured person to whom such hospital and medical services have been rendered because of such accidents.

—A public health conference was held at Mendota, February 24, by the Illinois Federation of Women's Clubs in cooperation with the state health department, parent teacher organizations and local health agencies. Speakers at the all day session included Drs. William A. Evans, Chicago, on ''Hard Times and Public Health''; Paul L. Schroeder, Chicago, ''Keeping in the Middle of the Road''; Grace S. Wightman, Springfield, ''Adequate Health Program for Small Towns,'' and Lena Sadler, Chicago, ''Mental Hygiene.''

—A program was given before the Chicago Tuberculosis Society, February 11, by Drs. Frederick T. Lord, Boston, on ''Pneumonia''; Francis M. Pottenger, Monrovia, Calif., ''Reflex Relationship of the Lungs to Other Organs''; Henry Kennon Dunham, Cincinnati, ''Emphysema a Serious Sequela of Arrested Pulmonary Tuberculosis,'' and Jay Arthur Myers, Minneapolis, ''Some Changes in Our Conceptions of Tuberculosis.'' These physicians are members of the board of directors of the National Tuberculosis Association, which held its meeting in the afternoon.

—H. 161 proposes to make it the duty of every physician, midwife or nurse who attends or assists at the birth of a child, to instil or have instilled in each eye of the new-born baby, as soon as possible and not later than one hour after birth, a 1 per cent solution of silver nitrate or some other equally effective prophylactic for the prevention of ophthalmia neonatorum approved by the state department of public health. S. 172 proposes that expenses attending the last illness, including physicians' bills to the amount of $250, funeral expenses and necessary costs of administration, be given a priority over all other claims in the distribution of a decedent's estate.

—The American Conference on Hospital Service gave a symposium on hospital economics, February 14. The speakers were Morris Fishbein, on ''Hospitals and Insurance''; Herman Smith, medical superintendent, Michael Reese Hospital, ''Group Payment Plans,'' and Rosco G. Leland, director, Bureau of Medical Economics, American Medical Association, who will lead the discussion in the form of a question box. Dr. Winford H. Smith, director, Johns Hopkins Hospital, Baltimore, addressed the luncheon meeting of the Central Council for Nursing Education, February 14, on ''Future Trends in Nursing.'' These organizations are meeting in conjunction with the Congress on Medical Education and Hospitals of the American Medical Association.

—Dr. Andy Hall, Springfield, has resigned as health officer of Illinois, and Dr. Frank J. Jirka, Chicago, has been appointed to succeed him. Dr. Hall, who completed a four year term as state health officer, had previously been health officer of Mount Vernon for about the same length of time. He was also mayor of Mount Vernon. He is a past president of the Jefferson-Hamilton County- Medical- Society and the Southern Illinois Medical Society; at one time he was secretary of the county medical society. Dr. Hall has three sons who are physicians. Dr. Jirka, who graduated from Northwestern University Medical School in 1910, is assistant professor of surgery at the University of Illinois College of Medicine, Chicago.

Deaths

Maurice William Aton, Chicago, Ill.; Loyola University School of Medicine, Chicago, 1917; member of the Illinois State Medical Society; aged 46; died, January 7, in Dayton, Pa., of angina pectoris.

Arista Bingley, Chicago; University of Illinois College of Medicine, 1898; a member of Illinois State Medical Society; aged 79; was killed, January 24, by an automobile, when crossing a street near Park Ridge.

Edmund J. Bowles, Chicago; Chicago Medical College, 1923; aged 53, died, February 7, of heart disease.

Charles Ford Bradway, Abingdon, Ill.; Butler University Medical Department, Indianapolis, 1882; aged 82, died, December 30, 1932, in St. Mary's Hospital, Galesburg, of uremia, prostatic obstruction and pyonephrosis.

Alfred Stephen Burdick, North Chicago, Ill.. Rush Medical College, Chicago, 1891, a Fellow, A. M. A., since 1921 president and general manager of the Abbott Laboratories, vice president and assistant general manager, 1916-1921; associate professor of medicine, Illinois Medical College, 1899-1904; president of the American Drug Manufacturers Association, 1923-1925; during the World War served on selective service board, number 59; in 1923 was appointed lieutenant colonel, medical reserve corps; author of "Standard Medical Manual," "The Remedy" and "Common Emergencies"; aged 65; died, February 11, in the Highland Park (Ill.) Hospital of pneumonia.

James Everette Coleman, Chicago; Loyola University School of Medicine, Chicago, 1928; aged 33; died, Nov. 18, 1932, in the Provident Hospital, of cocaine poisoning, self-administered.

Edwin Graffam Earle, Chicago; College of Physicians and Surgeons, Chicago, 1891; a Fellow, A. M. A.; formerly professor of histology and associate professor of medicine at his alma mater; on the staff of the Illinois Masonic Hospital and attending physician to the Columbus Hospital; aged 66; died suddenly, February 2, of angina pectoris.

Ralph Deems Fox, Bloomington, Ill.; University of Michigan Medical School, Ann Arbor, 1903; a Fellow, A. M. A.; member of the American Academy of Ophthalmology and Oto-Laryngology; on the staff of the Brokaw Hospital, Normal; aged 55; died, Dec. 31, 1932, of carcinoma of the pleura.

John Hamilton Gray, Morrison, Ill.; Hahnemann Medical College and Hospital, 1883; former State senator; aged 75; died, January 12, of influenza and pneumonia.

Guy Jerome Hall, Smithfield, Ill.; St. Louis College of Physicians and Surgeons, 1909; member of the Illinois State Medical Society; served during the World War; formerly mayor of Smithfield; aged 54; died, Dec. 26, 1932, in the Graham Hospital, Canton, of uremia and chronic nephritis.

Edward M. Irwin, Belleville, Ill.; Missouri Medical College, St. Louis, 1892; a member of Illinois State Medical Society; a former congressman, aged 63; died, January 30, of pneumonia.

Edward T. Juchhoff, Chicago; Chicago Medical College, 1918; aged 40; died, January 27, of chronic myocarditis.

Otto M. Kuehn, Waterloo, Ill.; Ludwig-Maximilians-Universität Medizinische Fakultät, München, Bavaria, Germany, 1864; Civil War veteran; aged 90; died, January 5, of broncho-pneumonia.

John J. Leahy, Lemont, Ill.; Rush Medical College, Chicago, 1885; for many years township and village health officer; president of the board of education; aged 69; died, January 24.

Sheldon Leavitt, Chicago, Hahnemann Medical College and Hospital, Chicago, 1877; professor of obstetrics at his Alma Mater, 1880-1898; and professor of gynecology in Chicago Homeopathic Medical College, 1898-1902; aged 84; died, February 1, at Chicago Memorial Hospital, following an operation for hypertrophied prostate.

William A. Mudd, Athens, Ill.; University of Louisville, School of Medicine, 1870; twice mayor of Athens, and formerly active in the Illinois State Medical Society, retired in 1927; aged 86; died, December 28, in Detroit.

Albert Peacock, Chicago; University of Buffalo School of Medicine; 1891; a member of the Illinois State Medical Society; aged 70; died, January 11, of myocarditis, influenza and pneumonia.

Adolph Roos, Oak Park, Ill.; Rush Medical College, 1887; aged 74; died, December 23.

Gustav H. R. Schroeppel, Collinsville, Ill.; St. Louis College of Physicians and Surgeons, 1892; aged 64; died, in St. Mary's Hospital, East St. Louis, February 3, of heart disease.

Frances A. Prindle Smith, Chicago Heights, Ill.; Northwestern University Woman's Medical School, Chicago, 1882; aged 90; died, Dec. 16, 1932, of senility.

Byron Stager Turner, Chicago; Chicago Medical College, 1887; a Fellow, A. M. A.; aged 69; died, January 7, of thrombosis, cerebral hemorrhage and carbuncle of the neck.

Charles Spencer Williamson, Chicago; Medical College of Ohio, Cincinnati, 1896; a Fellow, A. M. A., since 1912 professor of medicine and head of the department, University of Illinois College of Medicine, adjunct professor of medicine, 1901-1903, and professor of clinical medicine, 1903-1912; formerly assistant professor of diseases of the stomach and professor, Chicago Polyclinic; member of the Association of American Physicians and the American Society for Clinical Investigation; served during the World War as lieutenant colonel in the U. S. Army Medical Corps; director of the School of Military Hygiene and Sanitation at Fort Oglethorpe; in 1917 was awarded the certificate of Merit by the American Medical Association for an exhibit of research work; for many years on the staffs of the Cook County and the Research and Educational hospitals; editor of "French's Practice of Medicine" in 1910; aged 60; died, February 15, of coronary thrombosis.

Jacob Wilford Wine, Chicago Homeopathic Medical College, 1895; Rush Medical College, Chicago, 1901; a Fellow, A. M. A.; served during the World War; diagnostician in the contagious diseases department, Chicago Board of Health; on the Staff of the Columbus Memorial Hospital; aged 65; died, February 3, of coronary thrombosis.



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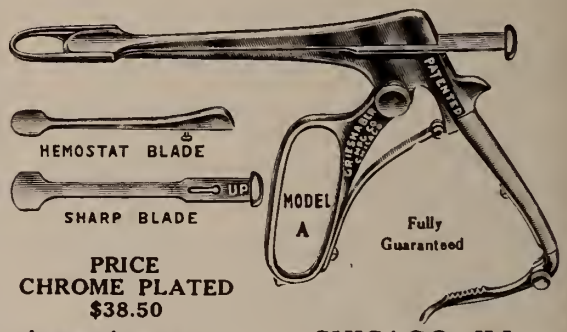
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(Continued on page 25)



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Book Notes

Medical Clinics of North America. (Issued serially one number every other month.) Volume 16, No. 4. (Boston Number—January 1933) Octavo of 256 pages with 33 illustrations. Per Clinic Year July 1932 to May 1933. Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W B. Saunders Company, 1933.

The contributors to this number are Doctors Walter Bauer, Harry Blotner, Blumgart, Christian, Ellis, Faulkner, Fitz, Halsted, Hunt, Jackson Jr., Jones, Joslin, Keefer, Lerman, Lord, Marble, Means, Minot, Myers, Reynolds, Robb, Robey, Root, Sprague, Weiss, Wesselhoeft, P. White, Priscilla White.

The Pelvis in Obstetrics. By Julius Jarcho, M.D. 140 Illustrations, 51 Tables. New York. Paul B. Hoeber, Inc. 1933. Price $6.00.

This is a practical manual of Pelvimetry and Cephalometry including chapters on roentgenolgical measurements. The material used in this work has been obtained from many sources and has been amplified from the author's experience.

Food In Health and Disease. By Katherine Mitchell Thoma, B. A. Philadelphia. F. A. Davis Company. 1933. Price $2.75 Net.

The application of dietetics is clearly set forth in this practical treatise. It reveals a thoroughly up-to-date character and scope of the subject matter.

Diseases of The Eye. By Hofrat Ernst Fuchs. Authorized Translation by E. V. L. Brown, M.D. Tenth English Edition. 255 Illustrations in the Text and 41 Colored Figures. Philadelphia, Montreal, London, J. B. Lippincott Company. 1933 Price $7.00,

A testimonial to the worth-while of this work is well described in the translator's preface to the tenth English edition. The translation of the works of Ernst Fuchs,* the great master of modern ophthalmology, has been made at the solicitation and request of a group of teachers and associates working in various teaching institutions in this country. They and I feel that Prof. Fuchs' great work, heretofore considered so valuable, will continue for years to have a great and undisputed value to the undergraduate, postgraduate and graduate student, to the research worker, teacher, writer, practitioner and consultant alike.

The Fundamentals of Good Medical Care. By Roger I. Lee, M.D. Lewis Webster Jones, Ph.D. assisted by Barbara Jones. The University of Chicago Press. 1933. Price $2.50.

This work is an outline of the fundamentals of good medical care and an estimate of the service required to supply the medical needs of the United States.

Medical Care for the American People. University of Chicago Press. Price $1.50.

This is number 28 of the publications of the Committee on the Costs of Medical Care and is the final report of this committee.

Organized Medical Service at Fort Benning, Georgia. By I. S. Falk, Ph.D. University of Chicago Press. Price .90 cents

This work is number 21 of the publications of the committee on the costs of medical care, with special reports on certain phases of the organization "Organized Medical Service at Fort Benning, Georgia."

Surveys of Medical Facilities in Three Representative Southern Counties. By C. St. C. Guild, M.D., Dr. P. H. University of Chicago Press. Price $1.00.

This is number 23 of the publications of the committee on the costs of the medical care. The work contains a statistical appendix on the method of selecting representative counties.

The Incomes of Physicians. By Maurice Leven, Ph.D. The University of Chicago Press. Price $2.00.

This is number 24 of the publications of the committee on the costs of medical care. The work is an economic and statistical analysis of the incomes of physicians.

The Action of the Living Cell. By Fenton B. Turck, M.D. New York. The Macmillan Company. 1933. Price $3.50.

In this work the author gives biology a new concept of physiological shock. Dr. Turck demonstrated that shock follows an original injury by about two hours, that hence, it must be caused by something liberated from injured cell and thrown into the blood stream as a poison. This cellular shock toxin Dr. Turck named Cytost.

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Calcium Metabolism and Calcium Therapy. By Abraham Cantarow, M.D. with a foreword by Hobart Amory Hare, M.D. Second Edition thoroughly revised. Philadelphia. Lea & Febiger. 1933. Price $2.50.

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EIGHTY-THIRD ANNUAL MEETING AT PEORIA, MAY 16, 17, 18, 1933

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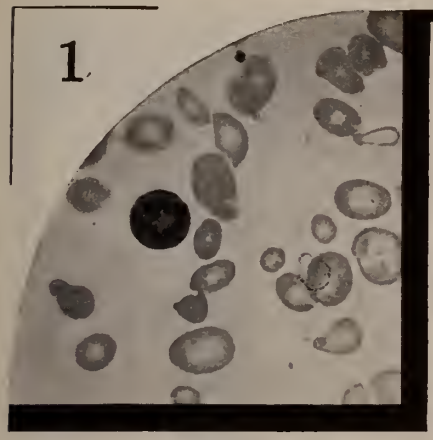




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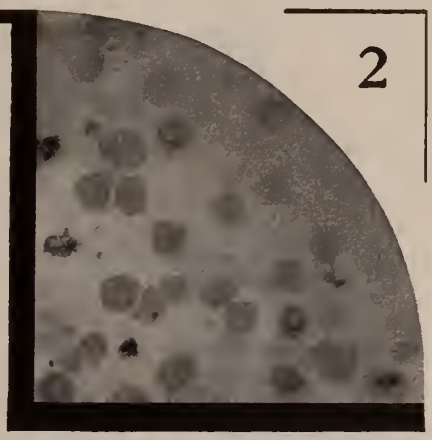
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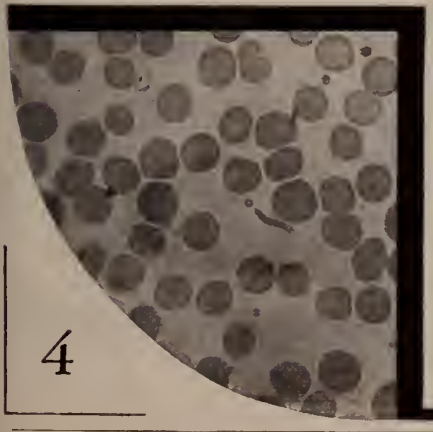
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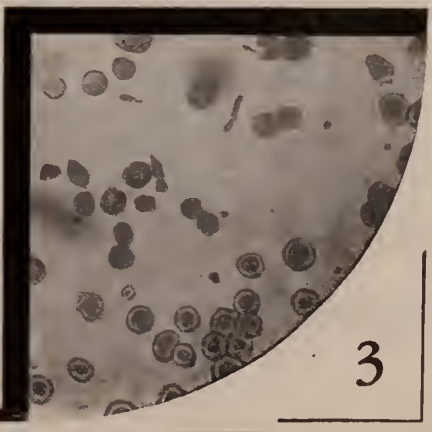
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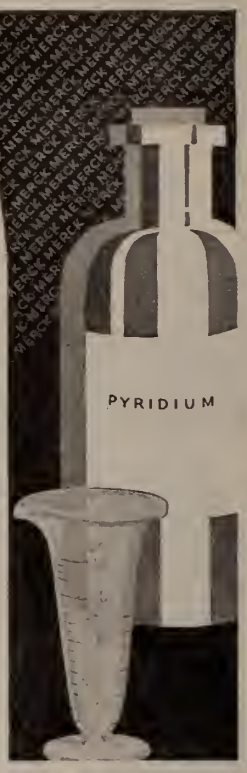
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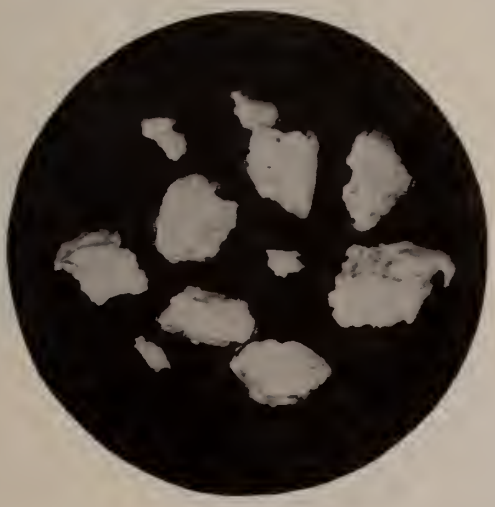
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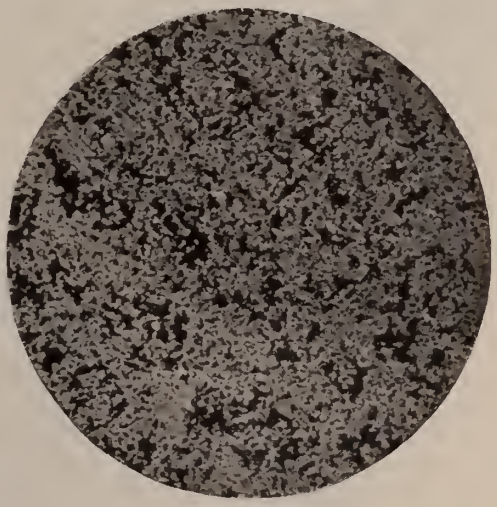
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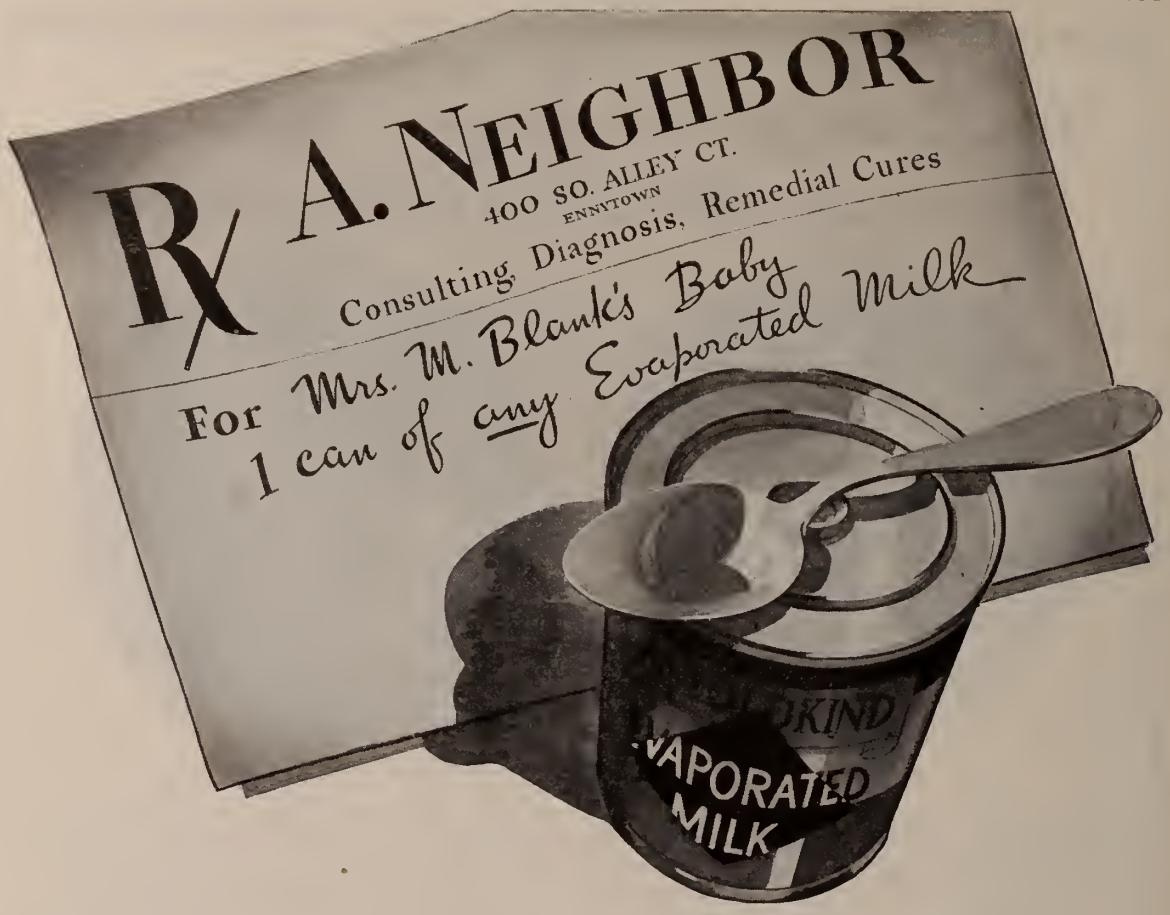
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Viosterol

USE OF VIOSTEROL DURING PREGNANCY

To the Editor:—Please advise me whether administration of irradiated ergosterol to pregnant women could cause a premature calcification of the fetal head, resulting in dystocia, with possibly damage later to the child.

M.D., Waco, Texas.

J.A.M.A., *Dec. 19, 1931*, *p. 1914*

ANSWER.—There is no danger to mother or child from therapeutic doses of viosterol (irradiated ergosterol) given during pregnancy. In fact, such medication probably would be of advantage, owing to the excessive drain of calcium and phosphorus that takes place during this period. This medication is especially indicated in cases in which the intake of calcium compounds has been insufficient.

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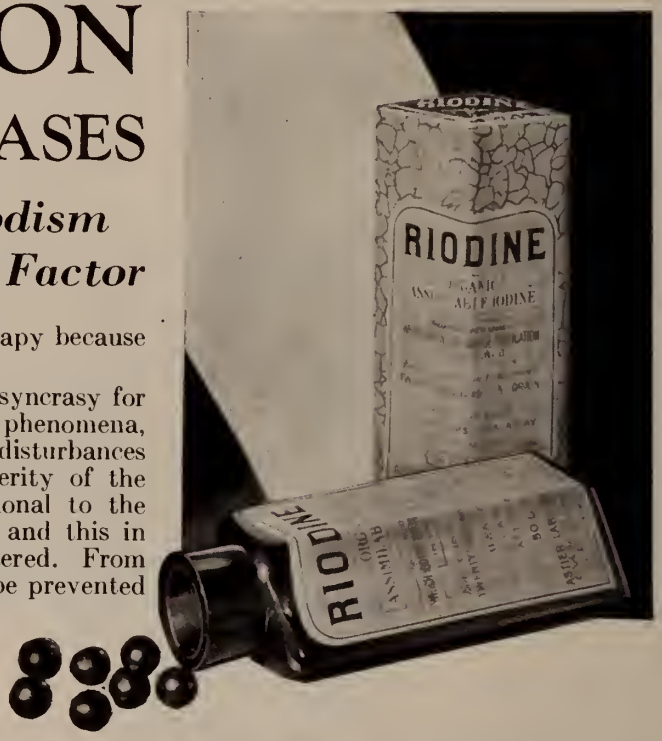
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Editorials

HOW BUREAUS GROW IN POLITICS AND BREED BUREAUCRACY

President Roosevelt's move towards the abolition of the devitalizing and unnecessary bureaus at Washington, came not a moment too soon and is proof of the verity of the doctrines for which The Illinois Medical Journal has been crusading for years.

A beautiful illustration set forth specifically of these doctrines which have furnished the editor with his texts of protest, and a revealatory index to the curse against medicine, the public welfare and the economic prosperity of science and of the nation is put down herewith in plain, provable figures and flat fact.

For the publication of these tables and statistics that show the strength and actual venom of the beast of bureaucracy the editor extends thanks to James M. Beck for his permission to quote them from Mr. Beck's book, "Our Wonderland of Bureaucracy."

The two tables printed herewith show how expenditures in the department of agriculture increased from $19,916,228.26 in 1911 to $296,865,944.69 in 1931, and this last staggering sum of expenditure was incurred when the entire country was bent almost to the breaking point in the worst panic of its history, and the problem of the farmer, whom the department of agriculture is supposed to serve was never so criminally tragic since the founding of the nation. The table of the bureau of commerce is equally inexcusable.

Among other verified tables from varying sources that throw light upon this incredibly debauching situation may be noted, first a table from the annual report of the Secretary of the Treasury, and second one published in "The Nation's Business"

Says one authority in pointing to the fact that government has grown many times faster than population, cites figures showing that the cost of operating the Federal government alone

DEPARTMENT OF AGRICULTURE

	1911	1931
General Administration	$ 3,554,778.73	$ 2,631,394.85
Experiment Stations	1,572,455.10	4,733,590.14
Extension Service	2,250,000.00	10,360,578.69
Weather Bureau	1,354,589.92	3,987,460.56
Bureau of Animal Industry	3,728,146.19	15,478,005.79
Bureau of Dairy Industry	.....	771,845.08
Bureau of Plant Industry	1,110,980.43	5,433,500.36
Forest Service	6,157,854.92	25,527,165.08
Bureau of Chemistry and Soils	.....	1,825,004.58
Bureau of Entomology	.....	2,662,348.09
Bureau of Biological Survey	.....	1,956,514.96
Bureau of Public Roads	.....	588,831 03
Bureau of Agricultural Economics	.....	6,188,832.96
Bureau of Home Economics	.....	209,024.57
Plant Quarantine and Control	.....	5,197,003.22
Enforcement of Grain Futures Act	.....	165,765.49
Food, Drug and Insecticide Administration	.....	1,614,666.10
Experiments in Dairying, etc	.....	45,240.36
Farmers' Seed Grain Loans, etc	.....	82,371.35
Co-operative Construction of Rural Post Roads	.....	155,913,895.72
Flood Relief and Porto Rico Hurricane Relief	.....	2,409,043.89
Mt. Vernon Highway	.....	3,392,958.62
Advances and Loans to Farmers	.....	48,742,387.76
Miscellaneous Items	187,422.97	252,962.59
Forest Roads, Trails and Highways	.....	11,715,725.11
Total After Adjustment Between Cash Expenditures and Checks Issued	$19,916,228.26	$296,865,944.69

"Our Wonderland of Bureaucracy," page 74, James M. Beck.

DEPARTMENT OF COMMERCE

	1914	1921	1932
Salaries, Office of the Secretary	$ 151,800.00	$ 196,050.00	$ 467,847.29
Contingent Expenses	35,602.22	50,007.55	340,759.45
Printing and Binding	.....	.....	760,000.00
Rent, District of Columbia	50,000.00	68,500.00	.....
Bureau of Corporations	253,300.00	Became Tariff Commission	
Census Bureau	1,122,820.00	7,550,000.00	6,270,581.75
Bureau of Foreign & Domestic Commerce	174,860.00	916,539.27	5,349,891.01
Steamboat Inspection Service	534,740.00	1,020,394.39	1,395,385.00
Bureau of Navigation	160,510.00	315,160.19	498,120.00
Bureau of Standards	627,533.12	1,306,262.47	3,036,870.00
Coast and Geodetic Survey	1,037,737.80	2,316,960.07	3,078,985.53
Lighthouse Service	5,073,208.49	8,878,808.70	12,162,811.24
Bureau of Fisheries	1,087,190.81	1,288,828.13	2,914,369.57
Miscellaneous	8,556.00	.....	.....
Payment of Claims	8,750.00	1,883.65	1,571.94
Refund of Fees	3,000.00	3,000.00	3,000.00
Employment Stabilization Board (Newly Created)	.....	.....	90,000.00
Radio Division (newly created)	.....	.....	649,540.00
Aircraft in Commerce (newly created)	.....	.....	10,372,555.64
Patent Office[1]	.....	.....	5,272,950.00
Bureau of Mines[2]	.....	.....	2,294,348.25
	$10,329,608.44	$23,912,394.42	$54,959,586.76

[1]Expense of Patent Office in Interior Department, Fiscal Year 1925, before transfer to Commerce ..... $ 2,812,789.11

[2]Expenses of Bureau of Mines in Interior Department, Fiscal Year 1925, before transfer to Commerce ..... $ 1,900,821.27

"Our Wonderland of Bureaucracy," page 79, James M. Beck.

has increased from less than $700,000,000 in 1910 to approximately $4,000,000,000 in 1923. What is true of the Federal government is equally true, comparatively speaking, of state and local governments.

"Not long ago, *The Nation's Business,* one of the most energetic crusaders for deflation of government, presented a few statistics which make it easy for the physician to understand why Congress is scratching its head over the question of balancing the Federal budget and how much it must hike the Federal income tax rates.

Says "The Nation's Business" in its table the costs of certain activities of the Federal government for 1925 and 1932 were listed as follows:

Board of Tax Appeals, $350,000 in 1925; $660,000 in 1932.

The following tabulation from the Annual Report of the Secretary of the Treasury tells the story:

(Figures to Nearest Hundred Thousands)	1927	1932	Amount of Increase	Per cent Increase
TOTAL EXPENDITURES	$3,493,600,000	$4,482,200,000	$ 988,600,000	28%
Less—Interest and Sinking Fund Payments (Statutory)	1,120,500,000	1,016,800,000	*103,700,000**	9*
Less—Miscellaneous—Not included in Budgets of Major Departments	409,100,000	270,300,000	*138,800,000**	34*
BALANCE—Which Was Expended by Major Departments, Commissions, etc., as follows:	$1,964,000,000	$3,195,100,000	$1,231,100,000	63%
Department of Agriculture	$ 156,300,000	$ 333,500,000	$ 177,200,000	113
Agricultural Marketing Fund—Net (Farm Board)	.....	155,000,000	155,000,000	...
Post Office Deficit	27,300,000	195,000,000	167,700,000	614
Treasury Department	151,600,000	312,900,000	161,300,000	106
War Department	360,800,000	483,700,000	122,900,000	34
Navy Department	318,900,000	378,900,000	60,000,000	19
Shipping Board	19,000,000	60,800,000	41,800,000	220
Department of Justice	24,800,000	53,800,000	29,000,000	117
Department of Commerce	30,900,000	54,700,000	23,800,000	77
Other Independent Offices and Commissions	35,400,000	57,600,000	22,200,000	63
Legislative Establishment	19,700,000	32,400,000	12,700,000	64
Department of Labor	9,900,000	14,100,000	4,200,000	42
Adjusted Service Certificate Fund	115,200,000	200,000,000	84,800,000	74
Veterans' Bureau (Veterans' Administration Since 1930)	391,500,000	784,400,000	392,900,000(A)	100
Interior Department	302,700,000	78,300,000	*224,400,000*(A)*	*74**
TOTAL OF MAJOR DEPARTMENTS, COMMISSIONS, ETC.	$1,964,000,000	$3,195,100,000	$1,231,100,000	63%

*Indicates decrease.

(A)—Since the Bureau of Pensions was transferred from the Interior Department to the Veterans' Bureau in 1931, in order to make a fair comparison with 1927 it is necessary to combine the expenditures of the Interior Department and the Veterans' Bureau for each period, which results in an increase in expenditures in those two divisions of $168,500,000 for 1932 as compared with 1927.

Bureau of Efficiency, $150,000; now $200,000.

Civil Service Commission, $1,000,000; now, $1,500,000.

Employes Compensation Commission, $2,250,000; now, $4,500,000.

Federal Board of Vocational Education, $5,500,000; now, $10,000,000.

Federal Farm Board, did not exist in 1925; now, $1,500,000 exclusive of advances for purchase of farm commodities.

Federal Power Commission, $30,000; now, $300,000.

Federal Radio Commission, did not exist in 1925; now, $400,000.

Interstate Commerce Commission, $4,000,000; now, $9,000,000.

Federal trade Commission, $1,000,000; now, $1,800,000.

Tariff Commission, $700,000; now, $1,250,000.

Veterans Bureau, $300,000,000; now, $735,000,000.

Bureau of Animal Industry, $10,000,000; now, $16,000,000.

Bureau of Dairy Industry, $450,000; now, $800,000.

Bureau of Plant Industry, $3,600,000; now, $5,800,000.

Forest Service, $10,000,000; now, $20,000,000.

Bureau of Chemistry, $1,400,000; now, $2,000,000.

Bureau of Entomology, $2,000,000; now, $2,800,000.

Public roads, $13,000,000; now, $125,000,000.

Bureau of Agricultural Economics, $4,500,000; now, $7,250,000.

Home Economics, $100,000; now, $250.000.

Bureau of Standards, $1,750,000; now, $2,750,000.

Bureau of Foreign and Domestic Commerce, $2,700,000; now, $5,250,000.

Bureau of Fisheries, $1,300,000; now, $3,000,000.

Bureau of Aeronautics, $500,000; now, $10,000,000.

Bureau of Immigration, $4,500,000; now, $10,000,000.

Bureau of Naturalization, $700,000; now, $1,100,000.

Women's Bureau, $100,000; now, $150,000.

Employment Service, $200,000; now, $900,000.

The article also compares the total costs of the major departments for 1925 and 1932 as follows:

Agriculture, $155,000,000; now, $243,000,000.

Commerce, $25,000,000; now, $50,000,000.

Interior, $83,000,000; now, $85,000,000.

Justice, $22,000,000; now, $50,000,000.

Labor, $8,000,000; now, $14,000,000.

Navy, $330,000,000; now, $360,000,000.

State, $16,000,000; now, $17,500,000.

Treasury, $147,000,000; now, $267,000,000.

War, $340,000,000; now, $330,000,000.

Quoting another keen observer who has made a careful study of similar statistics, commenting on the startling facts he had uncovered, said:

"There's an increasing and insistant demand that taxes be reduced. What stands in the way?

"The fact that the very men and women who want taxes reduced don't want government expenditures cut. That is, they don't want their own pet expenditures cut.

"Some time ago, I asked this question bluntly of Representative Will R. Wood of Indiana:

" 'Is there any way of reducing government expenditures?'

"His answer was:

" 'No, except in the Army and Navy. If you try to reduce the expenditures of government departments you meet too much organized opposition in Congress.

" 'There is too much 'If you'll help me save this for my constituents I'll help you save that for yours.'

"This is the great obstacle in the task of making government cheaper."

These are a few reasons why physicians are being compelled to dig deep, even until it hurts.

TOO MANY LAWS AND TOO MUCH REGULATION A MENACE TO MEDICAL AND CIVIC PROGRESS

Too many laws and too little respect for them is American plague. Cost of upkeep of paternalistic regime and its theft of personal intimate privileges beggars United States citizens as one person out of every seven is on public payroll, income tax exempt, and public servants and pensioners are increasing at a rate unknown to previous history.

Overcentralization at Washington usurps individual rights. "The least government is the best government." New and interfering laws multiply in the United States as rapidly as the staggering tax levies that are required to pay for the administration of meddling statutes that nobody wants and nobody needs except members of the bureaucracy rapidly destroying personal freedom and making this country the worst of autocracies. The situation parallels pre-revolution France.

"America is forced by law to do, and prohibited by law from doing more things than had been prohibited or required in autocratic Europe before the war." Bureaucracy is always a curse, and centralization a lethal menace under any conditions. Where the practice of medicine is concerned, it is fatal.

NEARLY HALF MILLION DOLLARS SAVED IN READJUSTMENT OF VETERAN'S APPROPRIATIONS

In President Roosevelt's economic program there is an estimated saving of upwards of $450,000,000 annually in veteran's appropriations. This huge amount is cut from the veteran's expenditures without taking anything from veterans with service connected disabilities. The figures mentioned are approximately the amount that the medical profession have for several years estimated could be saved by proper regulations of the appropriations for veteran's disability. A few of the conspicuous items of savings are, the elimination of the non-service connected disability allowances of approximately $225,000,000, allowances to Spanish American War Veterans of approximately $100,000,000 and nearly $50,000,000 by saving through a new schedule of disabilities.

Every member of the medical profession is justified in feeling a certain pride in the contribution that organized medicine made to this extraordinary victory. The campaign of information carried on over the last few years in medical journals and otherwise gave to the people the real truth pertaining to the defects, inequalities and inequitable features of the existing veterans law. Our propaganda helped to convince the voters and the tax payers that we could pay, and pay generously, to every veteran and the family of every veteran who had become disabled through wounds of illness in service, and at the same time save millions in political pensions.

THE MAJORITY REPORT OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE NOT ONLY SELLS THE MEDICAL PROFESSION INTO BONDAGE BUT HOLDS UP THE TAX PAYER FOR THE PRICE OF THE SALE

Unabatedly the roars of protest and even of derision keep up from laity and profession as to the majority report of the Committee on the Costs of Medical Care. You might almost think that what H. L. Mencken terms "a viper of the medical profession" in his figurative reference to the esteemed committee, had managed to bite itself instead of medicine at large and the general public, and, most specifically the great and groaning tax-paying body. Few authenticated cases, if any, go to prove that any organism can die of its own venom, yet such a result would be no more of a Munchausen stunt than that glaring majority report to the poisonous provisions of which so many exceeding fine members of the laity subscribed their names more in ignorance than in sin, and so found themselves and their names in company with those of some highly regarded professional and scientific men whose signatures certainly were set down more in enthusiastic, optimistic, millienniumistic altruistic flab-dabbery rather than with scientific precision.

Perhaps those medicos and statisticians should not be blamed too much. Even the immortal Patrick Henry declared "It is natural for man to indulge in the illusions of hope."

But Pat, the wise old patriot, knew that illusions were not the foundations upon which to build a country nor breed a nation. So he threw illusions into the garbage can, or the sluggish Philadelphia gutter, and set about finding a rock upon which might stand the greatest edifice ever reared by democracy.

It begins to look as if to the medical profession would lie the task Patrick Henry and his contemporaneous patriots begun. Their mantle would seem to lie upon Aesculapian shoulders.

Cleanliness and revision, like charity, need to begin at home. And before the medical profession, even in the cause of patriotism, begins to dust up its neighbors' doorsteps, there is a fine job waiting squarely upon its own threshold. Among other bits of undesirable flotsam and jetsam to be removed and scrubbed after, is this pathetically inept, almost ludicrous majority report of the Committee on Medical Costs.

Perhaps after all, the committee was not thumbing its nose at the medical profession but at the tax-paying general public when this report was drawn up. For by the same token that its workings when begun and its recommendations if followed make of the physician merely a much lambasted cog in the wheels of state, it also makes liable for the bills for the oil and steel and grinding and mechanical care of that cog, the already groaning and protesting tax-payer. In ladling out upon this poor little tax-payer,—you, and I, and the man across the street, and the underpaid clerk around the corner—this federal and governmental support of medicine and its workings that is known as state-medicine, *the majority report of the Committee on the Costs of Medical Care not only sells the medical profession into bondage but holds up the tax-payer for the price of the sale.* The process goes the old Army game one better by selling a man something that he does not want at a price he cannot pay.

What the medical profession and the tax-payer want right now is not only an Abraham Lincoln to free them from the Legreeishness of professional uplifters and socialistic looters but a Harriet Beecher Stowe and a Julia Ward Howe to get busy on proper propaganda to get the case of the abused before the public, and perhaps before the very abusers themselves.

Meanwhile the water never came down at Lodore with greater flurry and flush than falls and rages this very Niagara of protest at the yoke this committee would rivet upon the necks of the served and the server alike. Who wants this socialistic report, anyway? Who asked for it? Did the ex-ruler in the White House, whom Mencken calls "The late Wonder Boy" set the yeast that started this committee on a job of leavening "costs" for illness? God only knows and only He will tell. To the astute medico ever since the committee started to function on May 17, 1927 it bore all the earmarks of a "nigger-in-the-wood-pile" with a big bandwagon trailing on behind.

Now if the report means that this concealed

Ethiopian's job is to throw the burden of the doctors on the taxpayers of a certitude no self respecting bunch of men like the medicoes is going to barter the freedom they think they have for the sake of a few brass buttons that will turn them into public functionaries. After all "putting the costs of medical care upon a group payment basis, through the use of insurance, through the use of taxation, or through the use of both of these methods" is a whole lot of hoo-ey that belongs over in the soviet where cuckoos thrive and chaos holds a Roman holiday.

What Mencken calls "boards of public busybodies and gang politicians" get their Vitamin A from there, spiritually speaking anyway. Witness the plea in the propaganda of "the extension of all basic public health services, whether provided by the governmental or non-governmental agencies so that they will be available to the entire population according to its needs."

If ever there was a joker to let a bunch of brick-layers give orders as to the conduct of an obstetrical ward there it lies in that phrase, "or non-governmental agencies." And what a bunch of suckers the compilers of that majority report must consider the medical men to be when they drew that up, LET ALONE THE TAXPAYERS!

Perhaps the kindest comment, from professional lips, that has been uttered about this majority report is that "as a theory it is grand, but there are a great many times when grandeur does not fit into the scenery, and oftener yet when grandeur is not sound structure. In fact grandeur is more likely to be generic than specific and in taking care of the sick, usually it is the very specific that counts. To solve the problem of the medical security of the American people both science and vision and a practical idea of responsibility as well as a great deal of horse sense is going to be needed and needed sadly. Only physicians can solve the problem, because only the physicians realize all the ramifications of the problem. It has been their problem and they have learned it down through the ages. The burden of solving the medical impasse should not be placed upon the government. Governments are doing so well at their own job anywhere in the world. Certainly not by business either for business is based on profit and with medicine it is service first and profit afterwards as the self sacrificing lives of countless physicians reveal. The ministry, the law and medicine are the three items of leaven that make life possible and human, and all three should be beyond the pale of commercial rule and regulation. Their source of supply, their nucleus of existence lies in ethics and in service. Trained in such exactitudes these three redemptive, protective and preservative professions are qualified in ways through which laymen should not dare to try to walk.

What little hope there is for the medical profession in the report of this elaborate and extravagant committee lies in the minority report. Within the lines of this opinion are germs of the seeds that may bring a more fruitful season for healthful medical economics. But the greatest hope of all lies in the hour when the man on the street will turn around and take "the beam from his own eye" letting the medical profession struggle with its own motes.

MENCKEN MAULS MAJORITY REPORT OF THE COMMITTEE ON COSTS OF MEDICAL CARE

Henry L. Mencken's magazine "The American Mercury" flings wide and far the standard of intolerance for intolerance, and holds a niche of its own in the worlds of culture and literature.

What a wry grimace, then, must wreathe the lips of those of the intellegensia, who formed the backbone and the vocal organs, if not the brain, of the "Committee on the Costs of Medical Care" when they read the article "What Is Going on in the World," the lead for the March 1933 number of Mr. Mencken's magazine, and signed by "H. L. M.," himself!

Mr. Mencken's writings need no comment. They speak for themselves. Only direct quotations can do them justice. Anything else is to "paint the lily, gild refined gold." From the liberal excerpts Mr. Mencken permits the Illinois Medical Journal to quote herewith an idea may be gained of the truth of Mr. Mencken's vision as well as the damascene sharpness of his inimitable wit!

Mr. Mencken's final pronouncement on the entire report is as trenchant as it is terse. Writes he, in conclusion:

"In all this, I may seem to be venturing to tell the medical granddams how to suck eggs. If so, I apologize most humbly. My excuse is that the report which now disturbs them is addressed, not to the profession only, but to the general public, and that its recommendations, if carried out, would make every American his brother's keeper with a vengeance. That they lie within the range of practical politics I doubt seriously; the movement, indeed, has begun to turn in the other direction, and I hope to see the day when health departments are restored to their proper business of dealing with *general* menaces to the people's health, and free medical service is restricted to the actually indigent. (I begin to be so optimistic, indeed, that I even look for the day when the public schools will be confined to teaching the three *r*'s to the children of the poor, and all their present costly soarings will be only a dream dimly remembered.)

"But though the doctors seem to run no hazard of being converted into robots operated by politicians, as they might be if the committee's recommendations were put into thoroughgoing execution, they still face a very unpleasant professional situation, and it is no wonder that they discuss it in some alarm. Their remedy, as I have ventured to hint, is probably in their own hands. If, on the one side, they will unite in a genuine effort to throw off the uplifters who now victimize them, and on the other side try to rid their customers of the grotesque idea that being ill is a romantic business, and an excuse for the indulgence of levantine luxury and the waste of a great deal of money, most of it not in hand—if they will proceed realistically in both of those directions they may conceivably throw off some of the difficulties which now beset them.

"I confess that it always irritates me to hear medical men denounced as prehensile, as is often done, not only by quacks, but also by persons who should know better. They are actually, with very few exceptions, fellows of a vast and innocent sentimentality. The great majority, indeed, might be described with perfect accuracy as easy marks. The men of no other profession are so facilely operated on by specialists in other peoples' duties. They walk into the arms of every new uplifter who happens down the road. My hope is that the report of the Committee on the Costs of Medical Care, with its bald proposals to reduce them to a kind of peonage, will at last awaken them to the fact that they also owe some duties to themselves, and that, with everything else equal, the more they regard those duties the better they will be able to serve their actual patients.

"The health departments of the land, so far, have not got away with so much public money as the public schools, nor indeed with half so much, but they are certainly getting away with larger and larger sums every year. A generation ago their activity was pretty well confined to compiling vital statistics, to safeguarding water and food supplies, and to maintaining quarantines against contagious diseases, but of late they have gone in for doctoring and nursing on a truly colossal scale, and when the supply of customers runs out they actually send out catchpolls to track them down. If the free dispensaries be counted in as part of their service—and the committee itself apparently so counts them—then the health departments have gobbled at least a half of the work that private doctors were doing thirty or forty years ago.

"What this competition means to thousands of hard-working and competent medical men was made very vivid to me some time ago by the experience of an old friend. He was a doctor in a poor neighborhood in a large American city, and for almost three decades he had rendered good and faithful service to a large body of satisfied patients. He was no Osler, of course, but he took his profession seriously, kept up his studies, and was a pretty good all-round doctor. For years he made a comfortable living—delivering babies, lancing boils, looking at tongues, prescribing castor oil, and carrying out all the other procedures of a modest general practitioner. During the great influenza epidemic of 1919 he handled 200 cases, signed death certificates for only six patients, and was scarcely out of his clothes for a month. He was, in his neighborhood, a man of eminence, and he was not unknown outside it.

"But then the health department of his town began to go into the medicine business, and in a few years his practice was as good as ruined. Half a dozen free dispensaries of one sort or

another were opened in his bailiwick, and nurses on the city payroll began to rove the streets in municipal Fords, seeking prospects. One of his chief sources of income, in his palmy days, had been his obstetrical practice. He delivered babies at $20 a head, and took in enough at the business to pay his rent. But now the city nurses began pouncing on his patients at the first sign of divine retribution, and by the time those patients came to term they were installed luxuriously in some tax-supported maternity hospital, and having the time of their lives. My friend, of course, could not remonstrate with them, but it was at least ethical for him to make some discreet inquiries. 'The nurse told me,' he was commonly informed, 'that I could get a professor to help me—and it wouldn't cost a cent.'

"In a few years the practise of this laborious and worthy man was ruined, and he fell into grave difficulties. All of his more thrifty patients left him; there remained only a few dead beats to whom rooking the doctor was half the fun of being ill, and a rather larger body of insolvent morons who avoided the dispensaries in fear that the medical students supposed to lurk there would slaughter them to get their bones. Presently my friend became ill himself, and what remained of his once comfortable income ceased altogether.

"His colleagues, including some distinguished specialists, attended him gladly and without charge, for such is the fraternal custom of the craft, but the incidental expenses of his illness were heavy, and after it had gone on for a couple of years his reserves were almost exhausted. When he died at last he left next to nothing. This was the net reward of a quarter of a century of hard work. This was the natural fruit of state medicine, urged by fanatics and paid for by fools."

Few pens have probed the pathos of the professional uplifter's slaughter of the old-fashioned family doctor as does "H. L. M.'s" in this same article. To quote again:

"The doctors, in their combat with the visionaries of the committee, are handicapped by the fact that they are themselves largely responsible for the situation which gives its soarings whatever plausibility they may have. On the one hand they have not offered sufficient resistance to the evil tendency, so apparent since the turn of the century, to make medical care more and more expensive, and especially hospital care. And on the other hand they have given far too much encouragement to the baleful proliferation of free service. If now, with a Depression in full swing, those costs begin to be prohibitive to larger and larger numbers of patients, and they go flocking to the dispensaries for the treatment that they can't afford to pay for, it is certainly not surprising to find the professional do-gooders, who are always eager for more power, reaching out eagerly for the whole business, and proposing to reduce the doctors to the estate and dignity of hirelings working for them, and at their direction.

"I do not believe that the doctors, taking one with another, have profited to any considerable extent by the vast increase in the cost of medical care. The average income among them is probably not much more today than it was twenty years ago: if it has grown at all, then it is only to the extent that other professional incomes have grown. The general practitioner, indeed, is probably worse of today than he was then. Nor has most of the excess gone to the specialists. It has gone to the hospitals, and they have got it, not in the character of institutions for the care and cure of the sick, but in the character of luxurious hotels for the entertainment and flattery of the sick.

"Their luxuriousness is naturally most visible in the gaudy quarters and elaborate attendance provided for the rich, but it runs all the way down the line to the wards and dispensaries, and the cost of lodging a free patient has increased at almost the same rate as the cost of lodging a pay patient. In most hospitals of any pretensions caring for the former now actually costs more *per diem* than the average American hotel gets for a room, a bath and three meals. But this luxury, great as it is, is not enough for the patient who has to give any thought to his social dignity. He must buy more if he would keep up with the Joneses—and not infrequently that keeping up with the Joneses precipitates him into such a financial disaster that he is the rest of his life recovering from it.

"A substantial part of the increased cost, of course, is due to improvements in the art of

medicine. Not a few of them call for expensive apparatus, and all of them call for kinds of skill that cannot be had for nothing. It is obviously far more costly to make a series of x-ray plates and cardiograms of the heart than it used to be to do the whole job with a stethoscope, or even with the naked ear, as was the custom when I was young.

"But all of these costs are very easily exaggerated. They run, at most, to a great deal less than the costs of mere comfort and convenience. A large part of them even in the case of pay patients, are performed by persons who are notoriously underpaid—for example, hospital internes and student nurses—and all of them may be obtained by any reasonably prudent person at very moderate rates. What runs up the bill is the elaborate attention and entertainment that commonly go with them. Theoretically, it should be cheaper to treat a patient in a hospital than in his home, but actually, as everyone knows, it is immensely more expensive. He is housed in a building that commonly represents and investment of millions, he is boarded and lodged as comfortably as in a first-rate hotel, and in addition he is looked after day and night, in his special capacity of invalid, by a staff of persons who, however little they are paid in cash, must still be housed, fed and somehow clothed.

"It all runs to a formidable sum, even for light illness. People will not go to a hospital that has the name of being run parsimoniously; they prefer the gilded hell which offers all the latest luxuries, from sunbaths on the roof to bedside radios. They like to think that they have had the whole works; it somehow caresses their *amour propre*, and gives them a standing with the neighbors. Years ago, patients emerging from surgery used to devote their talk mainly to their sensations on going under the ether: now what they talk about is the cost of the adventure. And even those who pay nothing, I am informed, get pleasure out of the thought that the bigwigs who looked after them, if paid at all, would have been paid a lot.

"What is to be done about this I do not know, and neither, apparently, does the Committee on the Costs of Medical Care. The scheme it proposes would not really diminish those costs: it would simply tend to load them, in the long run, upon the taxpayer, and so encourage their infinite increase. The doctors themselves, realizing the gravity of the situation, have attempted to meet it in various American cities by setting up hospitals, or parts of hospitals, for patients of the so-called middle class—that is, for patients who are able to meet a reasonable expense when they are ill, and do not want to accept charity, but are yet too poor to maintain themselves for months on the scale of a bootlegger at Palm Beach. The trans-Atlantic steamship companies showed the way here when they began to operate one-cabin boats—comfortable enough for any rational person, and yet much less expensive than the fashionable liners.

"But the middle-class hospitals have been anything but roaring successes, save maybe in a few places. The very fact that they are relatively cheap seems to be the chief objection to them; the normal American, when he is sick, is eager for the best attention that he can get, and the general habit of mind of the country, apparently surviving the Depression, makes him believe that the best is necessarily the most expensive."

Says Mr. Mencken further

"The doctors have let themselves be hustled and run amuck by the public health brethren. The public health business tends more and more to fall into the hands of professional uplifters, and they spend a great deal more time discussing what ought to be done than what can be done. Their chief postulate seems to be that it is the bounden duty of the state to take care of every citizen who can't or won't take care of himself, and they are always eager to pour out the taxpayer's money to that end. But there is really no such duty. The really helpless and friendless sick, of course, must be cared for, if only to keep them from shocking the well by lying in the gutters, but the public responsibility does not go half so far beyond that simple business as uplifters appear to think.

"Nor as a good many otherwise sensible doctors have apparently come to think. They have, in their charity, allowed themselves to be imposed upon in a gross and shameless manner. They begin by giving free treatment to persons whose inability to pay for it is only too obvious, but bit by bit they find themselves

facing larger and larger hordes of dead-heads, until in the end, at least in certain fields, there are precious few pay customers left. The public schools, now in process of rational liquidation at last, have led in this movement, but the public health uplifters have followed hard upon their heels. The dubious doctrine that what ought to be done must be done has been converted into the even more dubious doctrine that what ought to be done must be done free, and as a result great multitudes of Americans, hitherto willing enough to pay their way, have been converted into mendicants, and a large part of the burden of their mendicancy has been thrown upon the medical profession.

There is, as a matter of fact, no plausible reason for arguing, as uplifters always do, that the privilege of first-rate medical care is a right that every free-born American acquires at birth, regardless of his merits or his means. It is nothing of the sort. Charity is not a franchise; it is only a favor, and it is a favor properly offered to the really helpless, and to no one else. It may impose upon the benefactor something that he chooses to regard as a duty, but it certainly gives no vested right to the beneficiary. In this region, as in others, sentimentality is a potent weapon in the hands of uplifters. They are adepts at convincing their betters that what they think ought to be done is ordained by God, and cannot be evaded without grave breach of decency. But though they know how to win customers for that idea, it remains nonsense all the same.

Thus the doctors are beset by uplifters on the one side, as they are beset by quacks on the other, and it is no wonder that they begin to be concerned about the future of their trade. The report of the Committee on the Costs of Medical Care has shaken them mainly because it seems to show that the uplift is beginning to invade their own house. But the truth is that it has been there for a long while, and with their own innocent connivance. If they were converted into public jobholders tomorrow, as the committee proposes, they would scarcely be much worse off than they are in many an American community today, with free dispensaries taking half of their patrons away from them, and luxurious hospital-hotels bankrupting the rest, and so leaving nothing for their own fees.

"Just how they are to get out of these difficulties I do not know. My gift for constructive criticism is indeed somewhat meagre. But two or three devices to the desired end are so obvious that even one who tears down without building up may discern them. One of them is to undertake a more bilious scrutiny of applicants for free service, and of agencies which seek to provide it. The doctors have let the public health and public schools schemers run away with them. They should have resisted this movement vigorously, as the lawyers in like case would have certainly resisted it, but in only too many American communities they have helped it on, thus acquiescing idiotically in their own destruction.

"In particular, the magic words, preventive medicine, have upset them, and led them into transparent follies. The first duty of a doctor, in prevention as in cure, is to his own patients, and not to a vague and miscellaneous mass of people who ought to be other doctors' patients. The limits of prevention are fixed by Nature, and within the limits of private practise they are plain enough, but when a medical man succumbs to uplifters and begins to rove the wide pastures of Utopia he sometimes loses all contact with fact, and begins to talk as foolishly as the uplifters themselves. If all the health departments ran as wild as the public schools were lately running, and every crazy scheme to abolish death were in full operation, people would still continue to die. The postponement of that event can never be achieved so effectively by public functionaries as by private practitioners. The man who can really manage it, in so far as it is possible at all, is the family doctor, and he will succeed in proportion as he devotes himself to his actual patients, and lets the rest of humanity take care of itself.

"Both the report of the Committee on the Costs of Medical Care and the caveats of those members who dissent from it lay great stress upon the importance of this family doctor. He has been forced into the background of late by the specialist and even more by the encroachments of state medicine. The committee proposes to save him by attaching him to a hospital and making a sort of minor bureaucrat of him. But this, manifestly, would not help him. On the contrary, it would widen

still further the breaeh which now opens between him and his patients, and make him still more the satellite of the specialists. The way to restore his old importanee is to restore his old functions, and that is certainly not going to be done by transferring even more of his patients to hospitals.

"What is needed, I suppose, is a revival of the home eare of the siek. In some part, of eourse, it must be impossible, for there are not a few medical situations in whieh, eonsidering modern methods of treatment, home care would be almost equivalent, to no eare at all. But the number of sueh situations is probably eonsiderably smaller than most laymen have come to think. A competent doetor is still eapable of taking eare of the overwhelming majority of his patients without lodging them in an expensive hotel, and if he had well-trained midwives and praetieal nurses to help him he eould probably look after many more.

"In this department, as both the majority and minority of the committee say, there has been bad planning. The hospitals have trained so many nurses that there is now an enormous oversupply of them, but they have been trained for hospital work, and are far less useful elsewhere than they ought to be. If there were a large body of nurses espeeially instrueted in the eare of patients at home there would be less tendency to seek hospital eare for every trivial sore throat or sore thumb, the eost of illness would be very materially redueed, and there would be more money left for the doetor's bill."

PROTOZOAL SURVEY OF ONE THOUSAND PRISONERS: CLINICAL DATA ON NINETY-TWO CASES OF AMEBIASIS

In a protozoal survey of 1,000 inmates at San Quentin Prison, H. G. Johnstone, N. A. David and A. C. Reed, San Francisco (*Journal A. M. A.*, March 11, 1933), observed infestation with Endamoeba histolytica in 9.2 per cent. Seventy-eight of the ninety-two men with E. histolytica infestation lived in or had visited areas in which it is well known that amebiasis is endemic, and thirty-six of these had lived in tropical regions at one time. Fifty-two men had experienced notable gastro-intestinal upsets, twenty-eight having complained of indigestion, sixteen of diarrhea or dysentery, and twenty-three were bothered with constipation when examined. Thirty-nine men stated that they did not have gastro-intestinal complaints. Of these, twenty-seven were under 30 years of age and in most cases had only recently been to endemic areas.

LIEN LAWS MAY BE SOLUTION OF ECONOMIC LOSS FROM ACCIDENT

As it is an admitted faet that the eountry has far too many laws already it would seem that there might be diseovered some method for offsetting the lamentable loss from hospital and medieal eare for automobile aeeidents, other than the diseussed lien laws.

Yet aetion of a sort and of an effieaeious sort is indieated. The lien laws now in foree in six states appear to be laeking in effieaey. Delaware, Montana, New Jersey, Virginia, Nebraska, and Oregon own lien laws applieable only to the proeeeds of some right of aetion by the patient upon some third party, either in the way of reeoverable damages or of insuranee against easualty. None of the six states eontains legislation extending to property rights, wages or similiar assets of the patient. As the tendeney of eurrent legislation is to extend rather than to narrow the exemption of the debtor, and that not without merit, it is hardly to be supposed that this personal property or produetion lien would ever be added. In Wiseonsin the State Board of Health estimates that in a year, through unremunerated eare for victims of motor easualties, physieians and hospitals lose annually in exeess of half a million dollars. The Ohio hospital assoeiations put the figure for Ohio in exeess of $300,000 for the same term. In Illinois it has been estimated at about $1,000,000.

Wiseonsin has been investigating the merits of a lien law. The eonelusion in that state appears to be that it will be of little praetieal benefit and as with the federal farm relief laws, that even if a law is passed that the need for relief will eontinue for some time. Taking a few Wiseonsin figures for a working example, statisties show that in 1929 something over 28% of all automobiles in Wiseonsin earried publie liability, a total deerease in these days of depression, and with inereased rates. Now with an estimated laek of motor insuranee in perhaps 85% of the eases, what good is a lien law that applies only to the reeovery of damages from insuranee?

Yet some aetion must be taken for this really gruelling loss. The majority of persons hurt in sueh aeeidents are of small means,

and cannot afford to pay for the nursing, hospital and medical eare demanded by their dire straits. Nor is it fair to pass another burden upon the already overburdened taxpayer by making the payment for carelessness on the part of the individual eome out of the pockets of an already well mulcted community. It is of authentieated note in the bargain that many a patient, promising the physician and hospital to pay such bills for treatment and care from damages when received, often gets the damages and forgets his personal salvage obligations.

Just where the cure lies remains to be seen. The immense number of damage suits either thrown out of the eourts or dragging along endlessly at further expense to the taxpayers does not seem to point to any more laws as a panacea. Here is another chanee for a Steinmetz of economics to step out front and produce a remedy.

REVIEW OF LEGISLATIVE SITUATION UP TO DATE
REPORT OF THE LEGISLATIVE COMMITTEE

The Fifty-Eighth General Assembly of the State of Illinois has been in session for thirteen weeks and has enacted about thirty different measures. The total appropriations to date for all purposes have been a little over $100,000. Almost $100,000 of this amount is to be spent for the emergency duty of the National Guard. There have been two prohibition laws passed and a sales tax. More than one thousand bills of various kinds have been introduced in the present session.

The Legislative Committee has had a considerable number of inquiries regarding the sales tax and as to how it will affect the medical profession. In conversing with the Chairman of the Legislative Committee, one of the attorneys connected with the legal department of the State made a few observations as to the probable effect it would have on physicians. He explained that there would be no tax on a physician's services, but in the event the physician dispensed and charged for his drugs a three per cent tax on such sales would be returnable. If no charge were made for the drugs, no tax would be set up.

In the case of a hospital, it was his opinion that the cost of a hospital room, including nurse and the usual eare, would be classed as a service and not taxable. However, food charged to the patient should be kept separate, in that it is taxable as are medicines or other supplies which eould not be classed as a service charge.

An interesting inquiry has come up as to whether dentists would have to pay a tax upon gold used in bridge-work and for other appliances sold to the patient. This decision would necessarily have to come from the Attorney-General.

The attorney said that despite the faet that an injunction has been filed against the Act, it would be much wiser for physicians to keep reeords of the sale of drugs from April 1st on. The Chairman of the Legislative Committee at Springfield has a number of the sales tax bills which may be had upon request.

Senate Bill 144, one of the welfare group of bills, is being opposed by the Soeiety, in that it sets up adequate machinery for state medieine. The bill has passed the Senate, together with a group of other welfare bills and is now pending in sub-committee in the House. The Legislative Committee does not at this time request help on defeating the objectionable portions of the bill, but in the event that it is reported to the Floor of the House, and the objections have not been removed, the usual proeedure in getting sueh information to your legislators will be asked.

The chiropractors are resorting to a sympathetie appeal by mail to the Governor asking that he direct the Legislature to give them relief from the present Medical Practiee Act.

The osteopaths have had their two bills prepared for a long time. They are being withheld pending the opportune time for introduction by the legislative committee.

Eaeh session of the Legislature has one or more facetious bills that have to do with the treatment of human ailment, and the strangest one up to date permits anyone to take a plaster impression of a person's mouth to have false teeth made, the proeedure not to eome under the Dental Praetice Act. Presumably, this bill is sponsored by a mail order dental laboratory in Chicago which manufaetures plates from such impressions and sells them by mail.

Bills touching on a number of subjects of interest to the medical profession have been in-

troduced and are being closely observed by the Legislative Committee. Among others is a uniform narcotic act, a bill to permit courts to require physical examinations of an injured party, one to require life insurance companies to furnish persons rejected with a copy of the physician's examination, a House bill amending the Workmen's Compensation Act to include occupational diseases.

A Senate bill would impose a one and one-half per cent tax on the incomes of physicians and other professions and occupations of $100 per month. The bill is still in committee.

The bill to require a physical examination of the contracting parties before marriage has been reported favorably to the Floor of the House.

The Medical Center bills for Chicago are to be heard in the very near future.

A bill is pending to abolish the licensing of midwives.

Bills are pending to give hospitals relief so that insurance companies, or others who are liable for an accident, shall pay the hospital, physicians, and undertakers direct. Another would give a doctor prior claim in an estate, not to exceed $250, for the last illness.

The Silver Nitrate Bill has withstood all efforts to amend it and is on final passage in the Senate in its original form. It will be enacted next week.

The Anti-vivisectionists, smarting under the severe setback they have had in the three previous sessions, very graciously informed the Legislature that they would not introduce their bill this year to enable the legislators to devote their full time in the interests of the economy program for the State. Rather an odd gesture.

Another bill is pending to regulate maternity hospitals.

All bills of interest to the medical profession are being scrutinized closely and additional information will be given in our regular bulletin service. Inquiries regarding medical legislation may be made to the Chairman at Springfield.

UNDER ETHER

Unpopular Doctor: "Ah, I've caught you under the mistletoe. I must claim my kiss."

Pretty Girl: "No doctor, there's only one thing you'll ever have a chance of kissing me under."

Doctor: "What's that?"

Girl: "An anesthetic."

PROGRAM FOR THE ANNUAL MEETING

The preliminary program for the 1933 Annual Meeting of the Illinois State Medical Society to be held in Peoria on May 16, 17, 18, 1933, is published in this number of The Illinois Medical Journal.

This is not the official, completed program, and there will no doubt be some changes, and additions which will appear in the May Journal. The Committee on Arrangements, and the Section Officers have been working hard to arrange things to make this Annual Meeting one to be long remembered.

As we go to press, we learn that some Societies on account of the present economic crisis, are postponing their annual meetings, but the Officers and Committees of this Society are working all the harder, to have an outstanding meeting in spite of all handicaps. The program is well balanced, and will all be given under one roof, the large, new Pere Marquette Hotel.

The members of the Illinois State Medical Society should once more realize that the annual meeting is their meeting, and they should plan to attend it. Peoria is centrally located, and readily accessible to all parts of the State by rail or auto, and with the network of hard roads to this Central Illinois Metropolis, Peoria can be reached from any part of the State within a short time.

Each County Society should be represented at the meeting, by members and of course by their own representatives in the House of Delegates. There are many important matters coming up for discussion in the House, and every component society should have a voice in the transactions.

The House of Delegates will be favored by a short analysis of the reports of the Committee on the Costs of Medical Care, by Rev. Alphonse M. Schwitalla, Dean, St. Louis School of Medicine and Surgery, St. Louis, who was a signer of the Minority Report. Father Schwitalla, a most forceful speaker, had an important part in the development of this Minority Report, and the Illinois State Medical Society is indeed fortunate in getting his consent to make this presentation at the meeting.

The completed, Official Program will be printed in the May Journal along with

complete details concerning the arrangements for the meeting.

Now is the time for all good members of the Society to plan to be in Peoria for the three day session, May 16, 17, 18, 1933.

ILLINOIS STATE MEDICAL SOCIETY

EIGHTY-THIRD ANNUAL MEETING
PEORIA, ILLINOIS
MAY 16, 17, 18, 1933

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Alternates	Delegates
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E. H. Weld...1933	C. S. Skaggs...1933
Andy Hall ...1933	Mather Pfeiffen-
I. F. Cutter...1933	berger 1933
F. L. Brown...1933	C. E. Humiston 1933
M. I. Kaplan..1934	*J. W. Van-
C. S. Nelson...1934	Dersliee 1933
N. S. Davis III 1934	C. J. Whalen..1934

C. B. Reed....1934
Wm. D. Chapman 1934
J. J. Pflock ..1934
G. Henry Mundt 1934
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*Deceased

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Woman's Auxiliary Headquarters
Pere Marquette Hotel

Woman's Auxiliary Registration
Pere Marquette Hotel

VETERANS' DINNER

The annual dinner and meeting of the Veterans' Service Committee is being arranged by the Committee, to be held at the Pere Marquette Hotel, on Tuesday Evening, May 16th, at 6:00 o'clock. The exact program has not yet been completed, but it will be of interest to all former Service men, as well as all other members of the Society. Tickets for the Veterans' Dinner will be on sale at Registration Headquarters, and by all members of the Veterans' Advisory Committee, and everyone is invited to attend this interesting meeting.

WOMAN'S AUXILIARY AND ALL VISITING LADIES

Registration and Information Headquarters, Pere Marquette Hotel

Tuesday, May 16, 1933

9:30 A. M.—House of Delegates Meeting. (House of Delegates to comprise entire State Board of Directors and the County Delegates.)

10:30 A. M.—Auxiliary business meeting. Palm Room—Jefferson Hotel. Open to all members and guests.

3:00 P. M.—Informal Tea.

6:30 P. M.—Dinner and Bridge for all Convention women.

Wednesday, May 17, 1933

9:30 A. M.—Anxiliary business meeting. Palm Room—Jefferson Hotel. Open to all members and guests.

1:30 P. M.—Luncheon. (Arranged by Peoria Committee.)

2:30 P. M.—Meeting of County Auxiliary Presidents with new State President, Mrs. Solomon Jones. (To be held at same place as the 1:30 luncheon.)

6:30 P. M.—Medical Society President's dinner.

Thursday, May 18, 1933

9:00 A. M.—Post Convention Board Meeting.

SECRETARIES' CONFERENCE

T. D. Doan, *President*.....Palmyra
H. A. Felts, *Vice-President*.....Marion
Elizabeth R. Miner, *Secretary*.....Macomb

Tuesday Morning, May 16, 1933

10:00—12:00.

10:00—"The Care of the Indigent." R. K. Packard, Chicago. Discussion opened by Harold M. Camp, Monmouth.

10:30—"Discussion of Some of the Phases of Contract Practice." Olin West, Secretary and General Manager, American Medical Association, Chicago. Discussion opened by E. P. Coleman, Canton.

11:00—"Some of the Obstetrical Problems of the Country Doctor." E. E. Davis, Avon. Discussion opened by Louis N. Tate, Galesburg.

11:30—"Medical Leadership Among Lay Groups." Lena K. Sadler, Chicago.

11:55—Annual Election of Secretaries' Conference.

MEETINGS OF THE HOUSE OF DELEGATES

Tuesday Afternoon, May 16, 1933

3:00 P. M.—First meeting of the House of Delegates called to order by the President, John R. Neal, for reports of Officers, Members of the Council, Chairmen of Committees, introduction of resolutions, and for other business that may come before The House.

Thursday Morning, May 18, 1933

8:30 A. M.—Second meeting of the House of Delegates called to order by the President for the election of officers, councilors, committees, and delegates to the American Medical Association.

Reports of Resolutions Committee and necessary action on resolutions, and for the transaction of other business that may come before The House.

At the close of the second meeting of the House of Delegates, the President-Elect, Philip H. Kreuscher, will be inducted into the office of President, by the retiring President.

GENERAL SESSIONS

Tuesday Afternoon, May 16, 1933

1:00—Eighty-Third Annual Meeting of the Illinois State Medical Society officially opened by the President, John R. Neal.

1. Invocation—
2. Address of welcome, Mayor of Peoria.
3. Address of welcome—Hugh E. Cooper, President, Peoria Medical Society, Peoria.
4. Report of Chairman, Committee on Arrangements, C. G. Farnum, Peoria.
5. Announcements, and adjournment for Oration in Medicine.

2:00—Oration in Medicine. Charles B. Wright, Associate Professor of Medicine, University of Minnesota Medical School, Minneapolis.

Wednesday Morning, May 17, 1933

11:00—Oration in Surgery. H. S. Crossen,

Professor of Clinical Gynecology, Washington University School of Medicine, St. Louis.

Wednesday Afternoon, May 17, 1933

1:30—President's Address. John R. Neal, President, Illinois State Medical Society, Springfield.

President's Dinner

The Annual Dinner honoring the President of the Illinois State Medical Society will be held in the Ball Room of the Pere Marquette Hotel, at 6:30 P. M., Wednesday, May 17, 1933. This will be strictly a recreational dinner meeting, with suitable entertainment, and no speeches. The past presidents of the Society will be honored guests at the Dinner. Following the dinner, the President's Dance will be held in the Ball Room, with music furnished by a real orchestra. Those preferring to do so, may play bridge during the evening. Tickets for the President's Dinner may be procured from any member of the Committee on President's Dinner, or at the General Registration and Information Desk. It is hoped that every member present at the meeting will do their part in honoring the President by attending the Dinner.

Section Programs

section on medicine

Walter H. Nadler.....*Chairman*
R. F. Herndon.....*Secretary*

Tuesday Afternoon, May 16, 1933

3:00—"Mediastinal Tumor With Report of a Case." W. H. Newcomb, Jacksonville.

3:20—"Agranulocytosis." H. G. Hirschle, Canton.

Symposium on Arthritis

3:40—"Diagnosis of Non-Specific Chronic Arthritis." Douglas Boyd, Highland Park.

3:55—"General Treatment of Chronic Arthritis." Ary J. Arlon, Chicago.

4:10—"Diathermic Hyperpyrexia in the Treatment of Arthritis." D. E. Markson, Chicago.

4:25—"A Comparison of Methods of Producing Hyperpyrexia by Various Physical Agents; Demonstration of a Simple Method." J. R. Merrimen, Evanston.

4:40—"Indications for Lung Compression in Tuberculosis Based on a Pathological Clinical Classification." Benjamin Goldberg, Chicago.

5:10—"Multiple Myeloma With Report of a Case." G. B. Stericker, Springfield.

Wednesday Morning, May 17, 1933

8:30—"The Use of Amorphous Phosphorous in the Treatment of General Paresis." Sidney D. Wilgus and Ralph H. Kuhns, Mr. DeLester Sackett and Miss Phillis Quittman, Elgin.

8:50—"The Technic in the Administration of Various Agents for Production of Hyperpyrexia in the Treatment of General Paralysis of the Insane." (Motion Picture Demonstration). Alexander J. Azar, Elgin.

9:10—"The Use of Sodium Amytal in Myoclonic Encephalitis." F. Garm Norbury, Jacksonville.

9:30—"Meningococcus Meningitis; A Clinical Study of 338 Cases." Maxwell P. Borovsky, Chicago.

9:50—"Primary Hypochromic Anemia." Howard L. Alt, Chicago.

10:10—"Urinary Tract Anomalies and Pyuria in Chilhood." John A. Bigler, Highland Park.

10:30—"The Action of Chondroitin and Other Compounds of Gluouronic Acid With Especial Reference to Migraine." Lathan A. Crandall, Jr., Chicago.

Wednesday Afternoon, May 17, 1933

1:30—"President's Address." John R. Neal, President, Illinois State Medical Society, Springfield.

2:30—"Cirrhosis With Hemochromatosis." W. H. Nadler, Chairman, Section on Medicine, Chicago.

Symposium on Heart Disease

2:50—"Classification of Heart Disease." N. S. Davis, III, Chicago.

3:05—"Acute Infectious Myocarditis." James A. Walsh and James G. Carr, Evanston.

3:20—"Coronary Artery Sclerosis." Don C. Sutton, Chicago.

3:35—"Auricular Fibrillation." C. C. Maher, Chicago.

3:50—"Treatment of Heart Disease." William A. Brams, Chicago.

4:10—"Present Day Uses of Quinidine." Lewis W. Woodruff, Joliet.

4:30—"Chronic Prostatitis; Its Importance in General Practice." Clarence H. Boswell, Rockford.

4:50—"The Use of Alcohol in Medicine." Clarence Fischer, Peoria.

Thursday Morning, May 18, 1933

Joint Meeting with Sections on Surgery, Eye, Ear, Nose and Throat, Public Health and Hygiene, and Radiology.

8:30—12:00.

1.—"Radiologic Evidences of Diseases of the Biliary Tract." James T. Case, Chicago.

2.—"The Value of Combined Cholecystography and Liver Function Tests." Harold Swanberg, Quincy.

The successful therapy of a large percentage of gall bladder disease is surgery. Surgeons are frequently shocked to find their patient dead 24 or 48 hours after a simple cholecystectomy where no trouble was encountered at the time of operation. Such deaths invariably occur in patients with a poor liver function. The liver function can be fairly well determined by the intravenous injection of Iso-Iodeikon,—the same dye that is used for intravenous cholecystography. In making an x-ray examination of the gall bladder, why not use the intravenous method of cholecystography, which will not only enable us to determine the presence or absence of gall bladder pathology, but at the same time ascertain the operability of the patient?

3.—"The Etiology of Ocular Disease." Illustrated by lantern slides. Harry S. Gradle, Chicago.

4.—"Outlook for Public Health." Frank J. Jirka, Director, State Department of Public Health, Springfield.

5.—"The Public Health." John W. H. Pollard, Evanston.

6.—"The Management of Hepatic Diseases." Charles A. Elliott, Chicago.

7.—"A Gastric Subject." H. M. Richter, Chicago.

SECTION ON SURGERY

Sumner M. Miller.....*Chairman*
George W. Post.....*Secretary*

Tuesday Afternoon, May 16, 1933

3:00—"Complicated Fractures of the Leg, and Their Treatment." E. B. Montgomery, Quincy.

3:30—"Non-Surgical Treatment of Bladder Neck Obstruction." H. L. Kretschmer, Chicago.

4:00—"Trans-Urethral Resection of Bladder Neck Obstruction." B. C. Corbus, Chicago.

4:30—"Tumors of the Thyroid Gland." J. E. Bellas, Peoria.

5:00—"Surgery of the Thyroid in Children." W. L. Bowen, Peoria.

Wednesday Morning, May 17, 1933

8:30—"Paradural Anesthesia in Major Surgery." J. R. Harger, Chicago.

9:00—"Paget's Disease, or Osteitis Deformans." Jerome T. Jerome, Chicago.

9:30—"New Trends in Cancer Research." J. K. Narat, Chicago.

10:00—"Rectal Obstruction." H. M. Streicher, Chicago.

10:30—"The Delivery of the After Coming Head." Bertha Van Hoosen, Chicago.

11:00—"Oration in Surgery." "The Surgeon's Duty in Cancer of the Uterus." Harry M. Crossen, Professor of Clinical Gynecology, Washington University Medical School, St. Louis.

Wednesday Afternoon, May 17, 1933

1:30—"President's Address." John R. Neal, President, Illinois State Medical Society, Springfield.

2:30—"The Treatment of Pulmonary Abscess." Carl L. Hedblom, Chicago.

3:00—"Some of the Essentials in the Diagnosis and Treatment of Urgent Surgery of the Abdomen." E. S. Murphy, Dixon.

3:30—"Non-Surgical Abdominal Pain." Don Deal, Springfield.

4:00—"Intestinal Obstruction." W. R. Cubbins, Chicago. Amos Fey, Galesburg.

5:00—"Carcinoma of the Jejunum." R. A. Kordonat, Chicago.

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SECTION ON EYE, EAR, NOSE AND THROAT

Frank J. Novak, Jr.....*Chairman*
George S. Duntley.....*Secretary*

1.—Chairman's Address,—"The Immunologic Viewpoint in Our Specialty." Frank J. Novak, Jr., Chicago.

2.—"Physical Measures in the Treatment of Hypertrophic Rhinitis." A. R. Hollender, Chicago.

3.—"Ophthalmoscopic Findings in Hypertension Conditions." James E. Lebensohn, Chicago.

This paper illustrated by Fundus Photographs and the presentation of apparatus used in direct determination of blood pressure of the central retinal artery.

Discussion opened by G. F. Suker, Chicago.

4.—"The Value of Eradicating Tuberculosis of the Mastoid and Middle Ear." Irving Muskat, Chicago.

Discussion opened by John E. Mulsow, Milwaukee, Wisconsin. (By Invitation.)

5.—"The Choice of a Cataract Operation for Senile Cataract." Illustrated by Motion Pictures. Oscar B. Nugent, and W. A. Fisher, Chicago.

Discussion opened by G. F. Suker, Chicago.

6.—"Standards of Visual Blindness." A. L. Adams, Jacksonville.

7.—"Effects on Ciliated Nasal Epithelium of Various Solutions Used in Oto-Laryngology." Irving F. Barnett, Chicago.

8.—"Spontaneous and Traumatic Detachment of the Retina." C. F. Yerger, Chicago.

Discussion opened by Jos. F. Duane, Peoria.

9.—"Ocular Signs on Findings of Exophthalmic Goiter." Elias Selinger, Chicago.

Discussion opened by Leo M. Zimmerman, Chicago.

10.—"The Relation of the Endocrines to Ophthalmology." Louis Bothman, Chicago.

Discussion opened by Beulah Cushman, Chicago.

11.—"Ocular Findings in Tryparsemide Treatment of Syphilis." Leo L. Mayer, and R. Denton Smith, Chicago.

12.—"Pus in the Neck;—Surgical Approach." Hanby L. Ford, Champaign.

Discussion opened by A. B. Middleton, Pontiac.

(This program will be given Tuesday Afternoon, and Wednesday. Exact spacing to be given in Official Program.)

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SECTION ON PUBLIC HEALTH AND HYGIENE

John W. H. Pollard.....*Chairman*
J. Howard Beard.....*Secretary*

Tuesday Afternoon, May 16, 1933

1.—"Cooperation Between the Health Department and the Local Physicians." Andy Hall, Mt. Vernon.

Discussion opened by W. R. Marshall, Clinton.

2.—"School Hygiene." Mr. F. L. Bacon, Principal, Evanstownship High School. Evanston.

Discussion opened by Mr. E. C. Fisher, Superintendent of Schools, Peoria.

3.—"Military Hygiene." Major A. P. Hitchins, M.C.U.S. Army, Fort Sheridan.

Discussion opened by Col. J. J. McKinley, Illinois National Guard, Hines—Lt. Col. A. B. Middleton, Pontiac.

4.—"Importance of Immunization in the Control of the Acute Contagious Diseases." H. S. Houston, State Department of Public Health, Springfield.

Discussion opened by C. George Appelle, Champaign.—W. M. Falbert, Decatur.

Wednesday, May 17, 1933

Symposium on Industrial Hygiene

1.—"Occupational Disease." M. Earl Brennan, East St. Louis.

Discussion opened by Wm. C. Nordholtz, Chicago.

2.—"Medical Organization in Industry." Don Deal, Springfield.

Discussion opened by E. A. Degenhardt, Chicago.

3.—"Health Engineering." Joel Connolly, Chicago Board of Health, Chicago.

Discussion opened by S. C. Beach, Chicago.

4.—"Laboratory Work in Industry." Lloyd Arnold, Chicago.

Discussion opened by Frank J. Smith, Chicago.

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SECTION ON RADIOLOGY

P. B. Goodwin.....*Chairman*
Robert A. Arens.....*Secretary*

Tuesday Afternoon, May 16, 1933

2:30 P. M.

1.—"Clinical Application of Excretion Urography." Norris J. Heckel, Chicago.

2.—"Pathology of the Urinary Bladder." H. J. Burstein, Decatur.

3.—"Urologist and Roentgenologist; Their Inter-relationship." Bradford Adelsberger, Peoria.

4.—"Value of Roentgenograms in Lesions of the Urinary Tract." Arthur Sprenger, Peoria.

Discussion of symposium opened by:

a—Herman L. Kretschmer, Chicago.

b—H. B. Henkel, Springfield.

e—F. Flynn, Decatur.

4:30 P. M.—"Fungus Infections of the Lung." Frank Deneen, Bloomington.

Discussion opened by M. Pollak, Peoria, and L. M. Hilt, Springfield.

Wednesday Morning, May 17, 1933

8:30—"Roentgenologic and Pathologic Diagnosis of Bone Tumors." M. A. Bernstein, Evanston.

Discussion opened by H. E. Cooper, and W. J. Roche, Peoria; and Walter Bain, Springfield.

9:00—"The Importance of Roentgenologic Examination of Growing Bones." Arthur Hawley Parmalee, Oak Park.

Discussion opened by Charles D. Stulick, Chicago; John R. Vonachen, Peoria; and Henry W. Grote, Bloomington.

9:30—"Roentgenology of Intracranial Tumors." Loyal Davis, Chicago.

Discussion opened by Emil Z. Levitin, Peoria, and F. W. Nickel, Eureka.

10:00—"Removal of Foreign Bodies in the Esophagus." (Method used thirty years ago.) C. U. Collins, Peoria.

"Present Methods of Removing Foreign Bodies." C. D. Sneller, Peoria.

11:00—"Oration in Medicine." Chas. B. Wright, Associate Professor of Medicine, University of Minnesota School of Medicine, Minneapolis.

Wednesday Afternoon, May 17, 1933

2:30—"Insurance Aspect of Roentgenologic Cardiology." Maximilian J. Hubeny, Chicago.

Discussion opened by R. E. Lee Gunning, Galesburg, and Harry A. Durkin, Peoria.

3:00—"Pneumoperitoneum and Surgery in Management of Abdominal Adhesions." Benjamin H. Orndoff, Chicago.

Discussion opened by Homer D. Junkins, Paris, and Arthur E. Perley, Quincy.

3:30 —

4:00—"The Proper Education and Registration of X-Ray Technicians." Gentz Perry, Evanston.

Discussion opened by James Archibald, Danville.

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DO YOU KNOW THAT—

Most births in general occur during the night; most twin births occur around mid-day.

The serologic paternity test can now eliminate every third man wrongly charged with being the father of a given child, whereas formerly only every sixth man could be eliminated.

Fourteen hundred, or about 35% of the physicians in Yugoslavia are employed in the health insurance societies in which only 7.1% of the general population are insured.

Carbon dioxide has been shown to lower intrapleural pressure and, therefore, to counteract the harmful effects of surgery on respiratory physiology.

Carefully controlled heat sterilization is the only uniformerly reliable and positive method of sterilizing surgical catgut sutures.

In dogs with pulmonary tuberculosis (human type), the atelectatic lobes produced by the occlusion of large bronchi with silver nitrate, show few or no tubercles.

Wayne County Bulletin.

EXHIBITORS AT THE 1933 ANNUAL MEETING

Abbott Laboratories, North Chicago.

A. S. Aloe Company, St. Louis.

DePuy Manufacturing Company, Warsaw, Indiana.

R. B. Davis Company, New York City.

General Food Sales Company, New York City.

Gerber Products Division, Freemont Canning Company, Freemont, Michigan.

G. F. Harvey Company, Peoria.

Horlick's Malted Milk Corporation, Racine, Wisconsin.

Kellogg Company, Battle Creek.

J. B. Lippincott Company, Philadelphia.

Mead Johnson Company, Evansville, Indiana.

The Medical Protective Company, Chicago.

Mellin's Food Company, Boston.

Sharp & Smith, Chicago.

Sutliff & Case Company, Peoria.

Universal Products Corporation, Pottstown, Pa.

Commercial Art Press, Monmouth, Illinois.

American Medical Association, Chicago.

American Society For The Control of Cancer, New York City.

American Social Hygiene Association, New York City.

Illinois Department of Public Health, Springfield.

Illinois Tuberculosis Association, Springfield.

Milton Bohrod, Fresh Pathologic Tissue Demonstration, Peoria.

Illinois State Medical Society, Section on Radiology.

Educational Committee, Illinois State Medical Society.

Groves B. Smith, Beverly Farm Inc., Godfrey.

Harold Swanberg and Arthur E. Perley, Quincy.

West Suburban Hospital, Oak Park.

Ravenswood Hospital, Chicago.

Chicago Society of Allergy, Chicago.

E. L. King, Radiologic Supplies, Peoria.

Cook County Graduate School of Medicine, Chicago.

(This list of exhibitors is incomplete, and will be given in full, in May JOURNAL.)

NOTES ON EXHIBITS

The American Medical Association exhibit will show the Members of the Association what is being done for them, as well as for the Public at large in the way of affording additional protection against fraudulent representations.

Hospital exhibit showing the work of the Council on Medical Education and Hospitals of the A.M.A. Mechanical apparatus, maps and charts will show the hospital situation in Illinois and the country at large.

Health education exhibit showing the work of the Bureau of Health and Public Instruction of the A.M.A. Mechanical apparatus, maps and charts will show the radio activities of the Bureau with health education material that the physician can use for public addresses to schools, clubs and other similar gatherings.

Physical Therapy exhibit, showing the work of the Council on Physical Therapy of the A.M.A. Charts and posters will depict the advantages and disadvantages of certain forms of physical therapy.

Tularemia exhibit from the Central Scientific Exhibit of the A.M.A. An exhibit prepared by Edward Francis, which received a gold medal in the Scientific Exhibit of the A.M.A., now installed in the Central Scientific Exhibit at the American Medical Association.

The Surgeon's "X-L-LYTE" displayed by the Universal Products Corporation, of Pottstown, Pa., will meet with the approval of all physicians, as it is a compact, electric diagnostic set, at low cost, contained in a neat, leather zipper case. This unique inexpensive diagnostic light has an otoscope, tonsil pillar retractor, tongue depressor, nasal speculum, and magnifying lens, and is also well adapted for transillumination. See this interesting diagnostic case, and you will want one.

Sutliff & Case Company, Peoria, will have an interesting display of their products, with some of the more popular, and newer specialties for the man in practice. They will also have surgical instruments, supplies, and a general line of accessories which will be of interest to the physicians attending the meeting. A cordial invitation is also extended to all members and guests of the Society to visit their large Peoria store while in the City.

The G. F. Harvey Company of Saratoga Springs, New York, and Peoria, will display many of their special pharmaceutical products. A generous supply of samples of their specialties will be available to those who desire them. A cordial invitation is extended to all visitors to visit their Peoria office and stock rooms.

Sharp and Smith, the old reliable Chicago surgical supply house will again present to the medical profession of Illinois a complete line of surgical and hospital supplies suitable for their selection, regardless of the particular line in which they may be interested. Specialists as well as general physicians may find many articles of interest at the exhibit which will be well worth a few moments of their time. Mr. Frazin, known throughout the State by those physicians who visit in Chicago, will be at the exhibit to look after your wants.

The American Social Hygiene Association of New York City, will present a most interesting exhibit on Congenital, and Cardio-Vascular Syphilis. These exhibits have received the Special Certificate of Merit, in their class, of the American Medical Association.

A representative from the office of the Association will be present to give these demonstrations.

Four Departments of the West Suburban Hospital, of Oak Park, will be represented in their unusual exhibit.

Dr. E. C. Piette,—Demonstration of specimens of general pathology and of some rare tumors.

Dr. Homer Humiston,—Specimens of Urologic pathology and use of resectoscope.

Dr. W. J. Potts,—Demonstration on Fractures; wire traction outfit; and walking cast.

Dr. W. R. Williams,—Corrosion preparations of heart and lung, particularly with regard to collapse therapy.

Horlick's Malted Milk Corporation, in booth No. 24, will exhibit the original malted milk and Horlick's Malted Milk Tablets, both products in natural and chocolate flavors. Recent experiments have shown that the regular use of Horlick's not only definitely

improves the appetite, but also builds strength and resistance to colds, and other diseases. Also Horlick's Maltose and Dextrin milk modifier will be displayed, which has achieved marked success in infant feeding.

The DePuy Manufacturing Company of Warsaw, Indiana, exhibit in booth No. 8, a new rocking leg splint, which eliminates bed pan trouble. No weights—chromium plated—rests on any bed. Used for treatment of femur, lower leg fractures and gunshot wounds.

The idea in constructing this splint was to make reduction easy for the surgeon, traction simple and greater comfort for the patient. Satisfied patients hasten recovery and insure better results. Come in and see us as you are always welcome. "Red" Bates will be there to serve you.

The Abbott Laboratories Exhibit will feature concentrated vitamins, with Haliver Oil as an outstanding product.

Medical science of today recognizes the importance of a high vitamin diet and these concentrated products should not be considered as another fad, but as something that must be studied seriously by every physician. The Abbott representatives will discuss the scientific background.

Dr. Groves B. Smith, Superintendent of the Beverly Farm Home and School for Backward Children, will demonstrate mental abilities of the varying grades of mental deficiency as illustrated by a moving picture demonstration of the practical application of the training of these various levels, a demonstration of the finished products that have been carried out by these individuals.

The idea is to bring to the physicians a better recognition of the types of mental deficiency and the types of training which can be given to each particular type of individual.

E. L. King, Central Illinois representative of Dick-X-Ray Company, St. Louis, is exhibiting X-ray illumination. 4,000 milliampere radiograms, X-ray tubes and electrocardiograph will be shown in the exhibit.

"Sanka Coffee is real coffee of rare excellence and has been accepted by the Committee on Foods of the American Medical Association with the statement 'is free from caffeine effect and can be used when other coffee is forbidden.'

"Sanka Coffee is decaffeinated before the coffee beans are roasted which leaves intact all its mellow flavor and fragrance. It is so rich and satisfying in flavor that the patient never craves caffeine-containing coffee."

Visit booth No. 54 and taste for yourself the deliciousness of Sanka Coffee.

The Exhibit of the American Society for the Control of Cancer will show the Canti film of living normal and malignant tissue and the effect of radium emanation on these tissues. There will be moulages of breast cancer of different types and photographs of the method of transillumination of breasts. Charts will be shown of cancer mortality and morbidity distribution by counties in Illinois and in the United States as a whole. There will be literature available both for the profession and for the laity.

Drs. Harold Swanberg and Arthur E. Perley, Quincy, Illinois, will feature in their exhibit "Roentgen Diagnosis." They will show by reductions made from Roentgenograms, the wide application of X-ray diagnosis in the present day practice of Medicine. Interesting roentgenograms of foreign bodies, bone pathology, joint disease, fractures, dislocations, bursae, heart disease, pulmonary pathology, gastrointestinal tract, gall bladder, genito-urinary tract, pregnancy, teeth, sinuses, mastoids, etc., will be shown.

It is the desire to show in this exhibit some of the practical every day applications of the X-ray in modern medical diagnosis, especially to the general practitioner.

A. S. Aloe Company, St. Louis, will exhibit an interesting line of modern surgical instruments, supplies for the specialist, as well as the man in general practice, and will have many things which will be of interest to all visitors at the meeting. Representatives of this well known firm will be present, to greet their friends, and show how they have kept up with Modern Medical and Surgical Progress.

All members of the Illinois State Medical Society and their friends are cordially invited to visit booth No. 38 of the Medical Protective Company. Mr. M. L. Allen, of the Peoria office will be delighted to have you call, whether merely to say "hello" and renew old acquaintances or to satisfy yourself on some questions of mal-practice protection. Consider him at your service and feel free to call upon him for anything which may contribute to making this the most pleasant and successful Society Meeting you have ever attended.

Mead Johnson and Company, Evansville, Indiana, has on exhibit its complete line of infant diet materials including Dextri-Maltose—Meads Newfoundland Plain or Flavored Cod Liver Oil—Meads Viosterol—Meads 10 D Cod Liver Oil—Meads (A-D) Viosterol in Halibut Liver Oil 250 D—Meads Undiluted Halibut Liver Oil—Meads Brewers Yeast Tablets—Meads Cereal-Sobee-Florena or Sunshine Flour—Meads Dry Malt Soup Stock—Meads Powdered Whole Milk-Alacta-Recolac-Casec—Meads Mineral Mixture No. 85.

There will be also for the examination of physicians a complete line of Mead's services such as diets for older children—Height and weight charts, etc., all of which are free to members of the Medical Profession in any quantity desired.

Representatives will be on hand to meet their friends and to discuss the application of any of the Mead products to infant feeding problems.

In the Kellogg Booth at the Meeting of the Illinois State Medical Society, there will be an interesting display comparing the value of All-Bran with other commonly used foods in iron and Vitamin B content.

Kaffee Hag Coffee and All-Bran cookies will be served at the booth to visitors. Miss Florence Cooley of the Home Economics Department, Kellogg Company, Battle Creek, Michigan, will be in charge of the exhibit.

The new Gerber product, Cereal, cooked in milk and strained, ready for feeding, will be on display at the Gerber Booth, No. 31. This food is intended as the first semi-solid food for infants. A combination of whole wheat cereals with added wheat germ is cooked in whole milk and then strained so as to retain the nutrients of the whole grains. The resulting product is such a

fineness that clinical trials have been made with infants of four and five weeks of age, who have been difficult feeding cases, with good results.

Information and a display of all Gerber products, Cereal, Vegetables and Prunes, and copies of publications are at the booth and available to you.

Visiting physicians and their friends are invited to stop at the booth occupied by R. B. Davis Company, where they may secure full information relative to Cocomalt.

Cocomalt is a scientific food concentrate in powder form. It is a delicious food drink composed of natural food ingredients in correctly balanced proportion to provide essential elements required for the well-being of the body. Cocomalt is prescribed and used by physicians in their private, hospital and clinical practice with a very high degree of success.

Cocomalt will be served either hot or cold to all persons in attendance so that they may judge as to "its quality and flavor."

The booth is in charge of representatives who will be pleased to answer questions concerning Cocomalt.

Dr. Milton Bohrod, Peoria pathologist, will give daily demonstrations of fresh pathologic tissue, which will be of interest to all physicians attending the meeting. This method of displaying interesting pathologic lesions, at medical meetings, has been increasing in popularity the past few years, and it is the desire of Dr. Bohrod to demonstrate pathologic lesions of general interest to all physicians at the meeting.

J. B. Lippincott Company will feature the Every Day Practice Series, edited by Harlow Brooks, consisting of monographs on important every day subjects by eminent writers, the binding of these volumes is a reproduction of a celebrated hand-tooled leather binding of 1499. They will also display the new Practical Fractures by Magnuson, the new Fuchs' Diseases of The Eye, translated by E. V. L. Brown; the new Operative Surgery by Kirschner, translated by Ravdin of the University of Pennsylvania, familiarly known as the Color Surgery; Children's Tonsils, In or Out? by Kaiser; Surgical Errors and Safeguards, by Thorek; and Tumors of the Breast by Cheatle and Cutler.

The Mellin's Food Company, Boston, will display their well known products, showing the source, nature and amount of food elements that enter into the making of Mellin's Food, the composition of the finished product, the caloric value of various quantities by weight and by measure, and what Mellin's Food accomplishes as a modifier of milk in the feeding of infants and adults.

All physicians are cordially invited to visit this exhibit, to ask questions and to offer suggestions that will lead to a thorough understanding of Mellin's Food, and its purpose.

The Commercial Art Press, Monmouth, Illinois, high class printers, will have an interesting display of several grades of printing for physicians which will be suitable to your special requirements. If you want physicians' stationery, prescription blanks, general office supplies, files, or special "set-ups," tell them what you want and get their prices which will be a surprise to you, and will fit your pocket-book.

The Illinois State Department of Public Health will have an interesting exhibit, showing a motion picture film and the proper method of taking specimens for diagnostic laboratory examinations and giving reasons why specimens should be taken in the way recommended. It is the idea of the Department that this picture should be shown several times a day in some area of the space available for exhibits. In addition to the film mentioned above, the Department has three other motion picture films that deal with laboratory procedures and laboratory services.

The Department will also exhibit four charts that relate to the trends in mortality from the principal causes of death in this State.

It is believed that these charts would be of some interest to the medical profession.

The Illinois Tuberculosis Association will have an exhibit showing efforts made in Illinois to combat Tuberculosis.

A complete synopsis of this exhibit will be given in the May JOURNAL.

There will be many other scientific and commercial exhibits, and complete details will be announced in the Official Program.

LABEL BORIC ACID SOLUTIONS POISON

The recent deaths of three infants by the accidental use of boric acid in a New York Hospital recalls six similar accidents in a Chicago Hospital in 1927 (McNally, W. D., and Rust, C. A.: The Distribution of Boric Acid in Human Organs in Six Deaths Due to Boric Acid Poisoning, *The Journal,* Feb. 4, 1928, p. 382). All these accidents occurred as the result of administering a solution of boric acid for water or saline solutions. The use of boric acid and its salts in the medical profession and in some of the economic lay industries has made them commonplace—so much so, in fact, that their power for harm through overdosage or accidental consumption has receded to the background until ordinary precaution, at times, is not used in administering these substances. The potential danger of boric acid poisoning is sufficiently great to make it imperative that all containers of solutions of boric acid in hospitals be distinctly labeled POISON, so that there will not be a repetition of this type of poisoning.

HOW TO KEEP FROM GROWING OLD

Always race with locomotives to crossings; engineers like it. Always pass the car ahead on curves or turns. Don't use your horn, it may unnerve the other fellow and cause him to turn out too far. Demand half of the road —the middle half. Insist on your rights. Always speed; it shows people you are a man of pep even though an amateur driver. Never stop, look and listen at railroad crossings; it conserves time. Drive confidently, just as if there were not eighteen million other cars in service. Always lock your brakes when skidding. It makes the job more artistic. Always pass cars on hills. It shows you have more power, and you can turn out if you meet a car at the top.—"Some Talk."

AUXILIARY NEWS—MARCH

The Woman's Auxiliary to the Chicago Medical Society have an exceptional announcement—

The Auxiliary will have a booth in the hall of science at the Century of Progress Fair. Members of the Cook County Auxiliaries will act as hostesses to all visiting auxiliary members and physicians' wives. The Chicago hostesses will act as a bureau of information as to the shopping district, hotels, transportation, points of interest in and around Chicago and will be happy to furnish information as to the objects of the Auxiliary. Auxiliary members and all physicians' wives throughout the country will receive a hearty and helpful welcome when they visit the space of the Chicago Auxiliary. Naturally all visitors from Illinois will receive extra special attention. Will all who are planning to come to the Fair please make a note to visit this booth in the Hall of Science.

Mrs. A. H. Brumback, President of Cook County Auxiliary, planned a Tour of the Century of Progress Fair grounds and buildings on March 22, 1933. The members of the five branch auxiliaries in Chicago were invited and 88 interested and enthusiastic women made up the group. The highlights of the tour were—Hall of Science, Temple of Jehol, Lincoln Group, Ft. Dearborn, Travel and Transportation, with luncheon at "Old Heidelberg" restaurant. With all these beautiful buildings and marvelously interesting exhibits it is hoped that many physicians' wives will find it possible to visit the Chicago Fair.

On March 18 in Chicago at the Stevens Hotel, the Board Members of the Illinois State Auxiliary met in an all day session under the leadership of its president, Mrs. E. W. Mueller. This was indeed a very successful board meeting, with 22 present, and the reports from officers, chairmen of committees, and councilors indicated clearly the advancement of auxiliary activities and the fine progress of this work in the State of Illinois.

The Chicago board members acted as hostesses to the out of town members at luncheon.

All Board Members are looking forward to a very successful Annual Meeting in Peoria May 16, 17 and 18th.

Mrs. F. P. Hammond, Chairman
Press and Publicity Committee

CONTINUATION OF ANNUAL REPORTS 1931-32

Organization Committee

Early in the year I wrote a letter to each Councilor giving her a list of the counties in her District. Following the plan suggested by the National Organization Chairman, I suggested ways by which Councilors might get in touch with those eligible for membership in the several counties.

I asked Councilors to report any organization activities to me, and offered my assistance in follow-up work in so far as I was able to give it.

In one County where some interest was shown and whose district was without a Councilor, I wrote to the Councilor representing counties nearby and asked her co-operation in trying to form an auxiliary in the adjacent county.

In a county in the First District, I followed up a request that an auxiliary be formed in that county, only to find that the County Medical Society in a regular meeting had voted not to sanction the forming of an auxiliary.

In the Fourth District I inquired why two auxiliaries had withdrawn from the State organization. The Councilor for this District may be able to interest these counties in re-organizing.

A county in the Sixth District reported having had organization before the State Auxiliary was organized but it had been short-lived through insufficient interest. A Councilor located in that district may be able to find some avenue of approach.

During the annual meeting last year in East St. Louis I met with a group of St. Clair County physicians' wives and assisted in forming a temporary organization which was perfected during the summer.

The reports of various Councilors will show that much effort has been put forth which will surely bring results in the near future.

Mrs. W. D. Chapman

Press and Publicity Committee

In following the instructions and wishes of our President and Board, and the duties outlined by the National Auxiliary I submit the following resume of this Committee's work during the past year:

1. Attended every Board Meeting and submitted a written report.
2. Established contact with the National Chairman of Press & Publicity, and have sent to her items relating to activities in the State of Illinois on five different occasions.
3. Established contact with all County Press & Publicity Chairmen asking them to send in news items, also newspaper clippings pertaining to their local auxiliary.
4. Established contact with Chairmen of Committees asking for an outline of their work for purpose of publicity.
5. Established contact with Dr. C. J. Whalen, Editor of the Illinois Medical Journal, and have sent to him monthly items of interest from all counties reporting news. Dr. Whalen has given us splendid co-operation and I wrote a letter of appreciation to him for his excellent support.
6. I have sent to Regional Press & Publicity Chairman of National Auxiliary our record book of clippings and press notices, which book was placed on exhibit at the National Convention in New Orleans.
7. Sent to local newspapers notices of Board Meetings in Chicago.
8. Maintained a file of all data from National Press & Publicity Chairmen, using such parts as might be applicable to the Illinois auxiliary.
9. Have kept a complete and systematic record book of all newspaper notices throughout the State, as well as other interesting data.
10. As a complete and permanent record of all press notices, articles edited for the State Medical Journal, etc., I submit with this report Record Book of accomplishments of this Committee.

Appreciation is extended to the Chairmen of Committees and County Press & Publicity Chairmen who have co-operated with me this past year.

Mrs. Frank P. Hammond

Printing Committee

Chairman, Mrs. R. K. Packard

Report on expenditures for printing contained in Treasurer's Report.

Convention Committee

Chairman, Mrs. H. B. Henkel

Complete program and details of Convention at Springfield published in May 1932 issue of The Journal.

Public Relations Committee

In the early part of the Auxiliary year letters recommending the appointment of a Public Relations Chairman was sent to all County Presidents and County Secretaries. Later another letter was sent to those counties which did not respond to the first request.

Replies have been received from eight counties, seven of which have appointed a Public Relations Chairman, i. e., Douglas, Cook, Coles-Cumberland, Will-Grundy, St. Clair, Rock Island and Vermilion. In Randolph County this work is being carried on by the President. She reports many contacts with other organizations. As soon as possible a Chairman will be appointed.

This committee sent a mimeographed leaflet called "Suggestions for Public Relations Chairmen" to all County Presidents, Secretaries and Public Relations Chairmen, as well as to the Branch Presidents and Secretaries of the Cook County Auxiliary. Letters have been received stating that same were helpful and that the "Suggestions" were being carried out.

Many counties have had open meetings at which time a special invitation was sent to Club Presidents and a general invitation extended to Club members. Talks on Anti-Vivisection, quack remedies and legislation have been heard. At one meeting the Canti film was shown and a talk explaining same was given. Speakers have been recommended for lay organizations and many valuable contacts have been made with other organizations. Letters of protest have been sent to Publishing Companies whose publications have contained articles which tended to destroy confidence in the medical profession. One member of the Auxiliary was responsible for the removal of a certain publication from several magazine stands which magazine contained an article that was extremely detrimental to the Medical profession.

We must continue to urge our members to join as many other organizations as possible. We must also urge that they become active in various committees and offices in order that we may better assist in directing the policies as well as the health activities of these organizations. We should urge our husbands to do the same.

We urge that every county have a Public Relations Chairman and that next year each Chairman keep a detailed account of her work to be sent to the State Chairman at the end of the year so that it may be embodied in her annual report.

Mrs. G. Henry Mundt

Credentials and Registration Committee

May 18, 1932

Number of Officers registered, 5; Number of Councilors registered, 5; Number of Chairmen of Standing Committees, 8; Number of Delegates, 17; Number of Alternates, 3.

Mrs. Lucius Cole

Legislative Committee

Upon appointment as chairman of this Committee I realized my first duty was to counsel with Dr. J. R. Neal, Chairman of the Legislative Committee of the Illinois State Medical Society, and with Dr. W. C. Woodward, Director of Legal Medicine and Legislation of the American Medical Association.

The whole-hearted cooperation of these physicians was cheerfully given. I incorporated their ideas and plans in a letter which was indorsed by our State President, Mrs. T. O. Freeman, and sent to each County Auxiliary in November.

In my local auxiliary we gave a legislative program. Dr. French of Decatur spoke on "Medical Economics." The meeting was well attended showing that especial interest was aroused.

Upon the advice of the Advisory Council the Executive Board of the Woman's Auxiliary to the Vermilion County Medical Society in February wrote to each representative and senator in Washington protesting against House Bill 7425 and gave the reasons why it should be defeated. The majority of the members of Congress answered our letters thanking us for our interest.

Mrs. H. I. Conn of Douglas County Auxiliary sent in an interesting report on legislative activities. Mrs. Conn stated that following a program on smallpox their society sent a letter to Dr. Andy Hall pledging their support to make vaccination compulsory.

Another program was devoted to the Jones Bill. A letter was sent to the two senators and the two congressmen at large from Illinois and to Representative Charles Adkins, stating the attitude of the Woman's Auxiliary regarding this Bill.

I wish I might report that every County Auxiliary had given a good constructive program on Legislation. No doubt some have for after sending my letter in November I received replies thanking me for my assistance and stating they were planning to use some of the material.

That we may be aroused and alert to the part we may have in getting better medical legislation and that the Auxiliary will seek to learn how to do this, is the desire of this Committee.

Mrs. Solomon Jones

Program Committee

The program for this past year has been education and has been approved by our Councilors. Our President, Mrs. T. O. Freeman, felt the need of stressing certain phases of auxiliary work and the topics have been chosen with this idea in mind.

Illinois' record for smallpox and lack of any state law for compulsory vaccination led us to choose this timely topic for the first meeting of the year. Many women's clubs and organizations, particularly Parent-Teachers and League of Women Voters, are doing much harm to the medical profession by suggesting and endorsing and even campaigning for passage of such bills as the Sheppard-Towner Act. In order that doctors' wives may present in intelligent and comprehensive manner their views of such legislation, our program recommends that we read our Illinois Medical Journal and also the Journal of the A. M. A.

We have asked all auxiliary members to read Hygeia, and to ask teachers and children to use it in schools and to have it placed in public libraries and homes. The printed message is very effective and surely something is necessary to combat such articles as are reviewed and listed in the "Survey of Popular Magazine Articles" which discuss medical subjects. Fakes, quacks, and misguided enthusiasts abound.

"Some Economic Aspects of the Practice of Medicine" as discussed in both our own State Medical Journal and in the National Magazine, is a most vital topic not only for the doctor, but for all the people. The doctors' business has not escaped the ill effects of the present economic unrest. This idea of something for nothing is well illustrated in the demand made by Parent-Teachers and some other organizations for free examination of school children and for free clinics and health centers. Child welfare work has come to be a hobby with many clubs and their zeal is all out of proportion to their knowledge. Also, their energies are mostly expended in getting the doctors to do the work and they take the glory while the doctor doesn't even get that. "Child Welfare and the Examination of School Children" offers many helpful suggestions.

"Books Written by Doctors and about Doctors" has been added to give the human side of the Physician. Too often this is forgotten by the patient.

One topic was sent each month to the county presidents in the state with a letter of suggestions and a list of references. We trust that these have at least been helpful.

Mrs. N. C. Iknayan

Revisions Committee
Chairman, Mrs. Harold Miller

A complete record of the splendid work done by this Committee is found in the revised copy of the Constitution and By Laws of the Woman's Auxiliary to the Illinois State Medical Society.

ANNUAL MEETING OF AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

American Association for the study of goiter will hold its next meeting at Memphis, Tennessee, May 15, 16, 17, 1933. The headquarters will be at the Peabody Hotel. Preliminary program is as follows:

May 15, 1933

8:00 to 10.00 A. M.—Hospital Clinics.

10:00 to 12:00 M.—Diagnostic Clinic—Dr. R. S. Dinsmore, Cleveland, presiding.

Discussion: Dr. H. J. Vandenberg, Grand Rapids, Mich., Dr. J. A. Crisler, Sr., Memphis, Tenn., Dr. A. G. Brenizer, Charlotte, N. C., Dr. A. G. Payne, Greenville, Miss.

Lunch

Dr. George E. Beilby, Albany, N. Y.
"Exophthalmic Goiter in Children"

Dr. O. W. Thompson, Chicago
"The Iodine in the Thyroid Gland"

Dr. C. Alexander Hellwig, Wichita, Kansas
"Morphogeographic and Experimental Studies in the Etiology of Goiter"

Dr. Harold L. Foss, Danville, Pa.
"When Is a Goiter Toxic"

Dr. John deJ. Pemberton and Dr. J. M. McCaughan, Rochester, Minn.
"Hemi-Aplasia of the Thyroid Gland: A Review of the Literature and Report of Five Cases"

Dr. William Weston, Columbia, S. C.
"Studies in the Prevention of Goiter"

Dr. A. G. McGhie, Hamilton, Ontario
(Title not yet received)

Dr. C. H. Mayo, Rochester, Minn.
"Thyroid Deficiency a Commonly Unrecognized Disorder"

S. D. Van Meter, M. D., Chairman, Denver, Colorado.

Evening Meeting

Presidential Address — Dr. Henry S. Plummer, Rochester, Minn.

May 16, 1933

8:00 to 10.00 A. M.—Hospital Clinics.

10:00 to 12:00 M.—Diagnostic Clinic—Dr. W. D. Haggard, Nashville, Tenn., presiding.

Discussion: Dr. Irwin Abell, Louisville, Ky., Dr. W. C. Chaney, Memphis, Tenn., Dr. Robert Austin, Dayton, Ohio, Dr. W. H. Parsons, Vicksburg, Miss.

Lunch

Dr. Richard B. Cattell, Boston
"Diseases of the Thyroid in Children"

Dr. Willard Bartlett, St. Louis
"The Rehabilitation of the Toxic Goiter Patient Viewed in a New Light"

Dr. Frederick A. Coller and Dr. Walter G. Maddock, Ann Arbor, Mich.
"Water Balance of Patients with Hyperthyroidism"

Dr. Arthur E. Hertzler, Halstead, Kans.
"Indications and Technic for Complete Thyroidectomies"

Dr. Charles H. Frazier, Philadelphia
"Carbohydrate Metabolism in Its Relation to Hyperthyroidism: A Continuation Study"

Dr. Benjamin Markowitz, Bloomington, Ill.
"The Life Cycle of the Thyroid Cell and Its Relation to Goiter"

Dr. Martin Nordland, Minneapolis
"Advantages and Technique of Preliminary Hemostasis in Thryoidectomy"

Dr. James A. Lehman, Philadelphia
"Hyperthyroidism Complicating Pregnancy"

Garden Party

Evening
Banquet

May 17, 1933

8:00 to 10.00 A. M.—Hospital Clinics.

10:00 to 12:00 M.—Diagnostic Clinic—Dr. M. O. Shivers, Colorado Springs, presiding. "Patients Without Classical Symptoms"

Discussion: Dr. E. P. Sloan, Bloomington, Ill., Dr. J. K. McGregor, Hamilton, Ont., Dr. H. C. Schmeisser, Memphis, Tenn., Dr. E. R. Arn, Dayton, Ohio.

Lunch

Dr. Shelby W. Wishart, Evansville, Ind.
"The Use of Digitalis Preparations in Thyrotoxicosis"
Dr. Donald Guthrie, Sayre, Pa.
(Title not yet received)
Dr. Emil Goetsch, Brooklyn, N. Y.
(Title not yet received)
Dr. Andre Crotti, Columbus, Ohio
"The Thyrotoxic Goiter Problem and the Autonomic"
Dr. H. H. Searls and Dr. Wallace I. Terry, San Francisco
"Further Obervations on Parathyroid Protection"
Dr. James A. Hill, Houston, Texas
(Title not yet received)
Dr. S. J. Waterworth, Clearfield, Pa.
(Title not yet received)
Dr. Geo. W. Crile, Cleveland, Ohio
Address

Members of the profession in good standing are cordially invited to attend this meeting. They are also urged to join a special group sailing from New York City, July 26th, to attend the *International Goiter* Conference to be held in Berne, Switzerland, August 10-11-12th. Special rates have been provided and daily programs arranged while en route to Le Havre. Those who are interested should communicate with J. R. Yung, M. D., Corresponding Secretary, Terre Haute, Ind., or S. D. Van Meter, M. D., Chairman, Denver, Colorado.

Medical Women's Day at the Illinois State Medical Society

May 16, 1933

Pere Marquette Hotel, Peoria

Morning Session, 10:00 A. M.

Marion K. Bowles, M.D., Joliet—Presiding

Presentation—John R. Neal, M.D., Springfield—President, Illinois State Medical Society.

Lay Group Outlines for Public Health Work—

Illinois Federation of Women's Clubs, Lena K. Sadler, M.D., Chicago—State Chairman.

Illinois Congress of Parents and Teachers, Mrs. C. W. Baleh, Chicago—State Chairman.

A Medical Society and Its Service to the Public—Miss Jean McArthur, Chicago, Secretary Educational Committee, Illinois State Medical Society.

How the Public Health Nurse Works With the Profession—Miss Louise Nicol, State Department of Public Health, Peoria.

Afternoon Session, 3:00 to 5:00 P. M.

2:00 o'clock — GENERAL OPENING MEETING.

3:00 o'clock—Harriett M. Daniel Graves, M.D., Murphysboro—Presiding.

Teaching the Lay Audience Diphtheria Immunization—Elizabeth D. Ball, M.D., State Department of Public Health, Springfield.

Opportunities in Preventive Medicine for the Woman Doctor as Seen by a State Health Officer—Grace S. Wightman, M.D., Chief, Child Hygiene Division, State Department of Health.

What I Would Tell Lay Audiences Regarding Prenatal Care—Esther Smueker, M.D., Tiskilwa.

Health Audits—Alice Conklin, M.D., Chicago.

Teaching Sex Hygiene to Children in the Home—Mabel Howe Otis, Moline.

Social Diseases—Caroline MacDonald, M.D., Chicago.

Round Table Discussion. Outlines and addresses to be distributed.

Evening Session, 8:00 P. M.

Margaret B. Meloy, M.D., Peoria—Presiding

Century of Progress in Health—Bertha Van Hoosen, M.D., Chicago.

My Experiences With Women's Clubs—Harriet Day Chandler, M.D., Decatur.

Mental Hygiene—Lena K. Sadler, M.D., Chicago.

HOTEL RESERVATIONS

Hotel Pere Marquette has been selected as headquarters for the Illinois State Medical Society Meeting, May 16, 17 and 18.

Reservations may be made direct with the hotel or through Dr. W. A. Malcolm, 920-30 Peoria Life Bldg., Peoria, Illinois. There will be no increase in rates, the regular rates as posted in each room prevailing. These rates are as follows:

Rooms with large double bed: $3.00, $3.50, $4.00 and $4.50 for one person. $1.00 additional to the single rate for double occupancy.

Rooms with twin beds: $6.00, $7.00 and $8.00 per day.

All rooms have private bath in connection.

A large number of advance reservations have already been received and it is suggested that those who have not already made reservation do so at the earliest possible moment.

FOCAL LESIONS OF SPINAL CORD DUE TO THE BEGINNING OF THE WORLD

A modest Scotchman, in speaking of his family, said: "The Douglas family is a verra, verra auld Scotch family. The line rins awa' back into antiquity. We dinna ken hoo far back it rins, but it's a lang, lang way back, and the history of the Douglas family is recorded in five volumes. In about the middle of the third volume, in a marginal note, we read, 'Aboot this time the warld was created.' "—New Outlook.

ALUMNI CLINICS

The Alumni Clinics in connection with the Fiftieth Anniversary of the founding of the College of Physicians and Surgeons, now the College of Medicine of the University of Illinois, will be given on Wednesday morning and afternoon, June 7, and Thursday morning, June 8. A buffet luncheon will be served on both days.

The Clinics will cover live subjects, which the practitioner meets daily. These will be illustrated by a large amount of clinical material, moving pictures and laboratory procedures. A part of each morning will be devoted to technical and operative demonstration. At this time an opportunity will be furnished for individual conferences and first-hand discussion of difficult problems. The new medical and dental laboratories will be open for inspection. The staffs of the pre-clinical departments will be on hand to conduct visitors through the laboratories and to make demonstrations of equipment as desired. Among the subjects presented at the clinics will be the surgery of pulmonary tuberculosis, eclamptogenic toxemia and studies in infant feeding. A large number of cases of hemophilia will be demonstrated. These cases are being used in the comprehensive study of this condition. The details of the program will be announced later.

The College of Medicine of the University of Illinois extends a cordial invitation to the medical profession to attend these clinics.

The Memorial Address, in memory of the alumni who made the supreme sacrifice during the World War will be delivered at the College, Thursday, June 8, at 2 p.m. This will be followed by a business meeting of the Alumni Association.

The Annual Alumni and Faculty dinner tendered to the fourth year class and commemorating the Fiftieth Anniversary of the founding of the College will be held at the Medinah Athletic Club, June 8, at 6 p.m. There are indications that this will be one of the most memorable gatherings of the Alumni in the history of the institution.

RELATION OF PHYSICAL CHARACTERISTICS TO SUSCEPTIBILITY TO ANTERIOR POLIOMYELITIS

Milton I. Levine, Josephine B. Neal and William H. Park, New York (*Journal A. M. A.*, Jan. 21, 1933), studied from an anthroposcopic point of view a series of fifty-two children paralyzed by anterior poliomyelitis in the epidemic of 1931 and fifty-two controls living in New York at the same time. All poliomyelitis patients were matched by controls of similar age and race. No outstanding differences between the groups were noted in a study of the following factors; separation of teeth, overbite, alinement of teeth, lunulae, color, pigmented spots, mongoloid eyes, epicanthal folds, genitalia, and bodily type.

The Literary Digest's poll shows that physicians favor repeal of the Prohibition Law. Maybe the drys think we need more dry doc's.—*Greensboro Herald Journal.*

Correspondence

PEORIA CITY MEDICAL SOCIETY EXTENDS YOU A CORDIAL INVITATION

The Peoria City Medical Society extends to every member of the Illinois State Medical Society, a most cordial invitation to be our guest during the meeting of the State Society in Peoria, May 16th, 17th and 18th.

The Peoria City Medical Society was organized in 1848, and Dr. Rudolphus Rouse, who was one of the organizers, was also one of the small group who organized the Illinois State Medical Society and served as its third President. In the past eighty years the Peoria Society has been a very important part of the Illinois State Medical Society and has been host to its annual meetings many times. Our unselfishness in acting as host is proven by the fact that Peoria, the second city in the State, has not had a President of the Illinois State Medical Society in thirty-seven years.

We are well organized, with every member doing his part in planning to make the 1933 meeting the most outstanding annual meeting the Illinois State Medical Society has ever had.

Plan to come, hear the papers and partake of our hospitality.

HUGH COOPER, President,
Peoria City Medical Society.

INVITATION FROM THE PEORIA MEDICAL SOCIETY

The Eighty-Third Annual Meeting of the Illinois State Medical Society will be held in Peoria on May 16, 17, 18, 1933. It is now time for all members of the Society to make their plans to attend this Annual Meeting. Everything is being arranged to insure the comfort of all members and guests at the Meeting. The Sessions and General headquarters are all arranged to be held at the large, new Pere Marquette Hotel. Peoria has other modern hotels entirely adequate to take care of the attendance regardless of its size.

The Peoria Medical Society is anxious once more to demonstrate the advantages of Peoria as a Convention City, and to show the type of hospitality it is noted for. The Chamber of Commerce and all other Organizations are interested in your welfare, and are working as a

unit to insure the success of the Meeting.

Every member of the Peoria Medical Society, the second largest component Society of the Illinois State Medical Society, will be on hand to greet the many visitors in our City, and to aid them in getting located, and seeing that they are well entertained throughout the Meeting.

Peoria is centrally located and readily accessible from all parts of the State of Illinois by its system of hard roads, or by rail. Ample facilities are available to care for all cars driven to the Meeting, and you will receive a special privilege card which will be to your advantage while in Peoria. Even though the present year may go down in history as one causing unusual economic distress, we believe that the members of the Illinois State Medical Society are going to attend their Annual Meeting, enjoy the sessions, and forget the "depression." We hope that the membership will respond well to this invitation, and we expect to tell you more about our arrangements and facilities for entertaining you, in the May number of THE JOURNAL.

C. G. FARNUM, M.D., CHAIRMAN,
Committee on Arrangements.
HUGH E. COOPER, M.D.
President,
C. W. MAGARET, M.D.
Secretary,
Peoria Medical Society.

SPECIAL NUMBER OF THE RADIOLOGICAL REVIEW

Quincy, Illinois
March 17th, 1933

To the Editor: We want to especially call your attention to the March issue of THE RADIOLOGICAL REVIEW which is being mailed to you today. This is our sixth annual RADIUM NUMBER and contains ten original articles especially written for this issue by leading Radium Therapists. It virtually presents the present status of Radium Therapy in this country. With the present-day, wide interest in Radium because of its great usefulness in the treatment of many forms of cancer, every medical editor will be interested in this number of the REVIEW.

THE RADIOLOGICAL REVIEW
Editor, Harold Swanberg, M.D.

FUNCTIONS OF STATE DEPARTMENT OF PUBLIC HEALTH AND STATE DEPARTMENT OF PUBLIC WELFARE

To the Editor: Among physicians of the State as well as the public at large there prevails a very definite confusion of thought in respect to the functions and activities of the State Department of Public Health and the State Department of Public Welfare. The distinct difference in the work of these two departments is not clearly understood by many people. This fact has been emphasized lately by numerous physicians who have called upon me concerning medical appointments in State hospitals for the insane. The Health Department has nothing whatever to do with the administration of any State hospital or other institution for the care and treatment of charges of the State.

The Departments of Health and Welfare are two separate and distinct organizations. While the activities of both deal with many phases of human health, the work of each is in a very different field from that of the other and requires a distinctly different type of administration.

The Health Department deals primarily with the control and prevention of communicable diseases. For this purpose it maintains diagnostic laboratories at Springfield, Chicago and Carbondale. It maintains no other facilities that could be classed as an institution of any kind or in any sense of that word.

All of the State hospitals and institutions which involve the care, treatment, reclamation, discipline and education of orphans, aged soldiers and their widows, the insane and mentally deficient, delinquents and criminals, come under the jurisdiction of the Department of Public Welfare. The research hospitals, including the institute of juvenile research and the hospital for crippled children, also come under the Department of Welfare.

The work of the Department of Public Health, on the other hand, bears directly upon the suppression, control and prevention of communicable diseases. Among the principal activities of the Department of Health are the following:

1. Collection, classification, analysis and study of reports of communicable diseases. In-

formation thus obtained is made the basis for immediate efforts to suppress epidemics and control diseases on the one hand, and for measuring results and planning ahead on the other.

2. Maintenance of the vital records of the State. This work, which involves the receipt, classification, compilation, study and analysis of all death and birth certificates forms the very foundation upon which public health programs and plans for activity are based.

3. Distribution of biologics such as vaccines for smallpox and typhoid fever, antitoxin and toxoid for diphtheria, silver nitrate for prophylactic use in the eyes of the new born, anti-rabic vaccine and arsphenamine. The two last named products are supplied free only for indigent patients but the others are all free upon request.

4. Diagnostic and bacteriological laboratories for the examination of specimens of all kinds concerned with the control of communicable diseases and of samples of water supplies.

5. Promulgation and enforcement of quarantine and other rules for the control of communicable diseases.

6. Epidemiological investigations and consultation diagnostic service in respect to communicable diseases.

7. Educational activities that relate to the control of diseases through the use of vaccines and sera, sanitation, hygiene, proper nutrition, etc.

8. Sanitary supervision over public water supply and sewage disposal systems and the natural waters of the State.

9. Sanitary supervision over milk supplies sold as a *pasteurized* product.

Aside from the distribution of biologics and the diagnostic laboratory activities, the work of the Department of Health is largely educational in character. Even in matters of quarantine and law enforcement the object is chiefly educational and seeks to make easier the prevention of disease through a wider knowledge of preventive methods.

In many of its aspects the work of the Department of Health is closely associated with the practice of medicine. For this reason, harmony of purpose and cooperative effort between the Department and the medical profession is important. The Department solicits the support and cooperation of the physicians of the State and it extends to them an invitation to utilize the facilities of the Department.

I shall appreciate it if you will insert this communication in the JOURNAL at an early date.

Very cordially yours,
Frank J. Jirka, M.D.
Director of Public Health.

LIFE BEGINS

The most recent atrocity perpetrated by that form of art called the motion picture business is a picture called "Life Begins," now being displayed in various sections of the country according to the whims of the censorship boards. The action takes place for the most part in a maternity hospital, and particularly in a ward devoted wholly to difficult cases. The strange notion that it is the custom in maternity hospitals to put all the difficult cases in one large ward is of course without foundation in fact. The picture is full of action; in fact, there is so much action in the ward that it seems slightly busier than the corner of State and Madison streets, the busiest corner in the world. One of the patients drinks herself into a maudlin state with whisky kept in a hot water bottle and shortly thereafter gives birth to twins. Other patients are constantly hopping in and out of bed to attend to various affairs, most of which are not their business. In this eight bed ward they are attired in handsome kimonos, which they wear in bed. In the midst of the turmoil a psychopathic patient from somewhere upstairs wanders into the ward and helps out the excitement by asking for her imaginary baby. Then she walks into the nursery and removes a baby, which she brings back into the ward, causing the mother of this infant to stage something resembling a riot. The chief action centers about a decision of the physicians in the case of a woman, under a twenty-year sentence for shooting some ward heeler, to save the life of the baby rather than that of the mother, because the mother would have to spend the next twenty years in jail. This they do against the wish of the woman's husband. The performance was viewed largely by an audience of women and young girls, the young girls being most of the time in a state of hysterical laughter and the older women flooding the place with tears. It has been repeatedly urged in these columns that the movies have not yet grown up. Apparently now they have grown up but become insane.—*Jour. A.M.A.*, Nov. 19, 1932.

THE MORAL OF THE TALE

Teacher (warning her pupils against catching cold): "I had a little brother seven years old, and one day he took his new sled out in the snow. He caught pneumonia, and three days later he died."

Silence for ten seconds.

Voice from the rear: "Where's his sled?"

—*Annapolis Log.*

Original Articles

THE RELATIONSHIP OF THE PSYCHOLOGIST TO THE PSYCHIATRIST WITH PARTICULAR REFERENCE TO SPECIAL CLASS DIRECTION

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The common-sense approach to the question, Who shall organize and direct special-class education—psychologist or psychiatrist? would more or less lead us to the respective individual training and experience of the specific persons under consideration. Since it is not my intention to deal in personalities, but rather general inter-professional relationships, my thesis will lose more or less point. Such a reflection is understandable when we realize that psychology and psychiatry are both in somewhat chaotic states; consequently the training and experience of those who profess the right to the name, "psychologist" or "psychiatrist," lack respective common features. Nevertheless, there are essential general principles and practices which are recorded as fundamental to the equipment of both of these professions.

There is a tendency for new special fields of science to vaguely spread themselves out in their initial evolutionary phases of development until they find themselves and become more or less crystalized. Moreover, overlapping is to be expected, indeed is almost inevitable, when we arbitrarily set about to sharply circumscribe closely related and integrated subdepartments of science. For example, behavioristic psychology overlaps physiology, and the latter in turn invades the subject of biochemistry. Yet there is clearly discernible legitimate reasons for any of these special fields to delimit themselves notwithstanding the common ground or overlap. Besides, it is becoming increasingly common to find certain persons well qualified and capable of functioning in two or more major fields of special sciences which were formerly considered the sole province of one person who consecrated himself to that specialty as a life work. Thus we find physicians who are educators, school and university administrators, psychologists, sociologists, physiologists, chemists, and vice versa. Indeed the swing of the pendulum toward the development of specialists is returning to that of *generalists* who are also "specialists" in one or more particular field. Such a trend has been motivated by many factors, such as a too often missing well-rounded perspective and training, high cost of specialists particularly in times of economic retrenchment, and the tendency of oversupply of "half-baked" specialists who fail to give the service expected of them.

For the purpose of definition of the respective fields of psychology and psychiatry, in order that their services may be best utilized without or with a minimum amount of reduplication, let us attempt to give generally recognized definitions of these two sciences.

Psychology is a *pure* science which considers its province the study of behavior, both implicit (consciousness and mentation) and overt (behavior and concrete performance). Its task is to describe facts whether normal or abnormal (deviations from the normal in behavior or consciousness) in these fields and explain them by methods of introspection or objective observation.

Psychiatry is a medical specialty, analogous to other medical specialties such as ophthalmology, urology or pediatrics. It is an applied science and art which has for its objective the diagnosis, treatment and prevention of mental disorders, diseases, defects or malfunctioning. It includes their physical and mental symptomatology, etiology, pathology and any other scientific knowledge that can be applied to their diagnosis (through and through understanding) and therapy (symptomatic, specific or preventive), as well as the hospital and institutional care of such patients. Indeed, the growing emphasis in the physician's functioning is veering from the negative to the positive approach. Thus we find medical leaders such as Sir William Arbuthnot Lane stating that the doctor's first duty is to deal with health, rather than with disease. Again, the writer recently heard a nationally known pediatrist urge his students that their main duty is to keep people well, and I would add, reasonably happy.

From our point of view, as well as that of many mature psychologists, psychology is considered as a pre-clinical and basic medical science analogous to anatomy, physiology, pathology and biochemistry. Like the latter sciences it should be viewed as an essential help to the

physician in the understanding and treatment of patients whether they present predominantly physical or predominantly mental complaints. Invariably both types of factors are present and should be respected for what they are worth in giving lifts to the individuals who come to the physician for help. Medicine is more and more realizing the need of treating persons with diseases rather than disease entities, and in like manner education is realizing that its chief business is to understand and develop pupil personality in its social adaptation through the wise utilization of subject matter and extra-curricular activities.

Thus it will be seen that the psychiatrist's training is broader in scope and application than that of the psychologists. The psychologist, like the physiologist, may assist the medical student and medical clinician in the application of the general facts and principles of psychology to certain diagnostic and therapeutic problems encountered in patients, such as psychometric or "mental tests" of intelligence. But the psychologist is not qualified to practice in the medical sense. Such functioning requires a much broader training in many other basic pre-medical and medico-clinical sciences besides psychology. The psychiatrist's training also requires experience in the art of handling patients and those who assist in caring for them. The psychologist is merely a specialist in a particular field of science. Like the physiologist or anatomist he is not a substitute for nor has he any directive functioning in the consulting room of the well qualified psychiatrist. Let the psychologist confine himself to the laboratory, classroom and research problems, pursuing the task of observation, description and explanation of the facts of behavior and mentation processes.

With this preamble, let us consider the best utilization of the psychologist and psychiatrist relative to special class problems.

We are in this instance dealing with problems in children suffering from varying degrees, and from different causes, of mental defect, inherited or acquired. From our definition of the province of the psychiatrist's functions, individuals handicapped by mental defect fall within his specialty. Thus we find in certain states, Massachusetts and New York, where leadership has been shown in the understanding and treatment of mentally deficient persons, that their state schools and institutions are directed by well-trained psychiatrists.

But the question has arisen, when is the care and training of the mentally deficient child an educational problem, and when is it a medical problem? It is also a question in the minds of many thinking persons, should the organization and handling of these children, intra- or extra-murally, in special (ungraded or opportunity) classes be under the direction of a psychologist or psychiatrist?

The answer to these questions to some extent hinges on the particular philosophy of education prevalent or uppermost in the persons who have the say in special class creation and organization. It is common knowledge that in most state schools for the mentally deficient, the director is a psychiatrist who is assisted by teachers who have had special class training in certain academic and non-academic subject content and methods. However, in most public school systems an educational psychologist is still in charge. This state of affairs is not only due to the tremendous role tradition plays in educational practice, but also, as has been above stated, the current educational philosophy.

Owing to a number of factors which point to the failure of traditional educational methods of arriving at their objectives, our philosophy and practice are happily changing—and for the betterment of the pupil and all concerned with his welfare.

It is now recognized that the real purpose of education is not to teach subject matter per se but to teach pupils. Although all recognize an educational problem in mentally deficient children, yet it is becoming the increasingly general viewpoint that our main problem with the mentally retarded and deficient child is not merely educational but his social and economic adaptation to life. This demands a director not in the main trained in technical aspects of the *materia educata,* but a person who is critically and thoroughly trained and experienced in dealing with personality and emotional problems, variations in human constitutional and temperamental material and the promotion of the individual and group health, happiness, efficiency and social adaptation.

In a current number of *Mental Hygiene,*

Dr. V. V. Anderson,[1] who has won world-wide recognition in developing psychiatric examinations and practice in the personnel programs of industry and education, and is at present director of a private school which is a pioneer in translating psychiatric facts and principles into educational practice, states:

".....the primary purpose of the college should not be the stimulation of scholarship, but the training and well-rounded development of the individual student; second, that the general development of the individual is not necessarily an accompaniment of scholarship (too often, scholarship is related to the highly ineffective, neurotic, and maladjusted personality); third, that the main question is whether the coördinator and director of such activities should be a man trained in subject matter, curriculum organization, and educational principles or a man trained in the study and evaluation of the human personality; a man trained in technical matters about school courses and subjects or a man trained in technical matters about individuals—an educator or a psychiatrist."

Again, in the same periodical, Dr. C. O. Cheney,[2] Director of the New York State Psychiatric Institute and Hospital, and Professor of Psychiatry, Columbia University, gives timely advice:

"The problems of the interrelationships between psychiatry, social work, psychology, and sociology cannot be solved in a final way at the present time. Psychiatry is interested in the problems in which these other disciplines are concerned in so far as they involve human relationships and maladjustments. It is not, however, prepared, nor does it wish, to take over the activities of these branches of social science. Each can contribute its part to human betterment, but exactly what the respective contributions and fields of activity should be can be determined only after continued study and the coöperation of the persons concerned, with their respective interests and training. We submit the thought that a more or less fluid relationship between these various branches is not necessarily a detriment, but rather may be conducive to more progress than if exact definitions were set up, since definitions often mean a limiting and constriction of activities. A static condition may result and stimulus and curiosity for the extension of knowledge may be inhibited.

"We have the conviction, however, that the treatment of mental deviations, with their intimate mental and physical interrelationships and symptoms, remains within the province of the science and art of medicine and that psychologists or other lay workers with an academic education and perhaps a short course of lectures on psychiatry and mental hygiene, or even with certian clinical contacts with psychiatric problems, cannot thereby arrive at an adequate understanding of the causes and symptoms of mental deviations or be prepared to treat them properly.

"It is hoped that, as time passes, more thorough understandings may be reached. Meanwhile it seems important to avoid as far as possible, in our contacts with others interested in social problems, those emotional reactions which are apt to arise when we seem to be deprived of something that we think belongs to us, or when we are told that we cannot have something that another person has and that we think should be given to us. Educators rightfully believe that from their long experience they have a certain knowledge and understanding of pedagogical principles, and a criticism of their practices as ill advised and non-constructive naturally arouses a feeling in them that persons without adequate experience are trying to preëmpt a field that cannot adequately be occupied by them. Such criticisms, of course, bring about in us as well as in others resistance and defense reactions, and we as psychiatrists should know that a destination can be more quickly and happily reached by accompanying a person on the way than by driving him."

Even a cursory glance at the foregoing opinions and facts indicate that the psychiatrist's role in sharing and directing what was formerly thought to be the sole *sanctum sanctorum* of the educator has taken on a new complexion. Perhaps in another generation the educator of today would fail to recognize his colleague functioning in grossly different atmospheric perspective and practice.

It sometimes happens that educational administrators fail to see in proper proportion the functional relationships of psychologist and psychiatrist in special-class responsibilities as well as in child guidance work. Accordingly such demands and puzzling states and decisions as the following have arisen in the minds of some school administrators:

1. It would be to the advantage of the psychiatrist himself to do Binet-Simon Tests on pupils who are considered by the teacher as special class material. This would present an opportunity to the psychiatrist to win rapport with the school personnel and "sell himself" by rendering needed service.

2. In many instances of children suffering from mental retardation, there are also problems of maladjustment involving personality, conduct and emotional mal-functioning. Should the psychiatrist do his own psychometric tests he would be on the alert to discover and nip in the bud such disorders.

3. In some instances, it is pathetic to see exhibited the feeling-attitude that the psychologist and teacher personnel can render equal service to that of the psychiatrist in the

1. Anderson, V. V. and Kennedy, W. M. Psychiatry in College. A discussion of a model personnel program. (Mental Hygiene, 16:353-83, July, 1932.)

2. Cheney, C. O. Psychiatry in the Community. (Mental Hygiene, 16,384-91, July 1932).

understanding and reconstruction of personality and behavior disorders encountered in school work. It has also been said that although the psychiatrist is an excellent diagnostician, he fails to reconstruct the problem in a more effective manner than is already being done by the non-psychiatric personnel. Consequently some educational systems have dismissed their psychiatric "help" and replaced him by a "clinical psychologist." Because of such incidents, other administrators have been loath to employ psychiatrists. Such an attitude is only understandable when either the psychiatrist lacks essential training for his specific task or when he misconstrues a non-psychiatric problem, as solely his own. Perhaps gratuitous bias rather than a sympathetic inquiring, cooperative attitude is the leading factor.

4. Another interesting comment relative to the psychiatrist's attempt to re-educate the educator or amplify his present fund of knowledge and practice is that he utilizes too many technical terms and phrases which he fails to elucidate to his lay audience. On the other hand should he make himself understandable, he is often said to be merely uttering the common-garden variety of common sense.

By way of briefly commenting on and boring through such statements just enumerated, I should like to bring into focus the following facts and opinions:

1. Since the best and most economical utilization of available personnel should be our aim, it would seem to be folly to take the time of the psychiatrist for psychometric testing when such can be done by a less experienced, less highly trained, and less expensive personnel. The well trained psychiatrist will have no difficulty selling himself to school teachers and administrators on the basis of the therapeutic results in handling various behavior aspects of child conduct. Psychiatrists should in the main refuse referral requests which have as their reason or complaint "mental age or I. Q. desired." As a psychiatrist in one of the foremost departments of pediatrics in this country once told me, "I see red when I get such a request. No time is lost in returning the referral request to the sender." Such a reaction has an educational value since it forces the physician or other referring person to state the *complaint* in terms of what the child or others referring him would like help for. The mental age or I. Q. may or may not be a telling factor in the case. In any event it is only one of a large number of elements to be evaluated, and oftentimes the least significant. As far as special class formation is concerned, the request for the individual testing of mental age or I. Q. of pupils thought to be suitable material for such classes should be directed to the psychologist. Such request involves primarily an educational problem, not a psychiatric one. On the other hand, requests for help on the basis of a complaint which designates the pupil as "poor progress in school," "unable to learn in school," "uncooperative and takes no interest in school work," "has repeated every grade," etc. may be considered cases for psychiatric examination. Such *individual* complaint problems are matters of psychiatric concern; the mere psychometric examination of children for special class placement is primarily a matter for psychological examination.

2. Common sense should dictate that it is poor utilization of the psychiatrist's valuable and costly time to do psychometric examinations of children en masse for possibility of special class placement with the concomitant hope of ferreting out personality and emotional problems. Since the services of psychologists and psychometric examiners may be obtained for one-half to one-third of the cost of psychiatric service, it is obviously indicative of lack of relational perspective, if not an imposition, to request or expect a psychiatrist to do this work. Granted that the psychiatrist is trained in the pre-medical science of psychology (and the day is coming in medical schools when this science will be given as much deserving attention as anatomy or physiology), it is comparable to asking the physician or medical specialist to do routine urinalysis in the hope of discovering cases of nephritis, or comparable to asking him to do routine blood-counts in the hope of discovering a case of anemia. Such work can be done sufficiently efficiently by technicians. Of course the physician is always glad to hear and personally examine extraordinary specimens or findings and the technician should be instructed to notify the doctor should such be discovered. Similarly psychologists and psychometric examiners should call to the psychiatrist's attention more or less out-

of-the-ordinary behavior and personality problems encountered in their mental testing work. Frequently the psychiatrist wishes to do his own psychometric tests as well as his own physical examination, when time permits and when he is anxious to gain indirectly the patient's emotional reactions, attitudes and behavior. Thus when the patient is more or less off his guard in a non-formal psychiatric examination valuable supplementary information of telling importance to the psychiatrist is often obtained by such a practice.

3. More discriminatory efforts should be made in the selection of psychiatric personnel in relation to the specific position they hope to fill. This will lead to a more favorable reaction from educators since they are somewhat overfed or "fed up" on the "hip-hip-hurrah" phase of mental hygiene or preventive psychiatry. Concrete performance with favorable results which the school is unable to obtain without psychiatric help is the request now made of the psychiatrist. The latter must be on his guard not to promise more than his critical experience would indicate, and also caution those who seek his service that the millennium has not yet arrived—that many psychiatric cases are relatively unmodifiable.

4. Psychiatrists should school themselves to present their material to lay audiences in language that is clear, shorn of technicalities, and as simple as possible. It should be directly related and woven into the school's actual problems, experience and needs. Directions must be explicit and commensurate with the local opportunities and willingness of the school personnel to carry them out. Commonsense language and method is not to be decried; it is our greatest need. But it should be of the critical and trained variety. The psychiatrist's medical training should unobtrusively bring home the fact that although common sense and experience are good, they are not sufficient in themselves. As in the instance of intelligence, there is also an obvious "G" factor in commonsense psychiatry and common-sense psychology. We would therefore expect at times that lay persons would give some of the counsel which a highly trained psychiatrist might impart. But even though it be identical in kind, though different in quality, school administrators have told me that to have a psychiatrist say more or less the same thing gives a sense of authoritativeness with consequent favorable reaction on the part of the person seeking or needing help.

I have attempted to clarify some of the current problems of certain working and professional relationships of the psychologist and psychiatrist, particularly as their functioning relates to special-class problems and cognate interests. We have seen that the psychiatrist is first and foremost a physician who is engaged in the practice of an applied science and art; the psychologist, on the other hand, is a specialist in a pure science who sets for himself the task of observation, description and explanation of the facts of behavior and consciousness. His work is largely confined to the laboratory, classroom and research fields; the psychiatrist concerns himself with individual problems concerned with mental defect, disease and malfunctioning, their treatment and prevention. It is felt that the direction of reconstruction of these problems, which include mentally deficient and retarded children, and therefore special class organization, should be in the guiding hands of the psychiatrist rather than the psychologist. The latter may well assist the former in such work for. example, as concerns "methods," especially when the psychiatrist lacks a basic training in psychology and pedagogy. Attention is given to some common misunderstandings and opinions of psychiatric functioning as it has shown itself in certain educational fields. It is the author's hope that his attempt at interpreting the conceptions and working relationships of these two professions will result in a more balanced perspective and a smoother working integration of their respective services.

State Education Department.

PRIMARY ACTINOMYCOSIS OF STOMACH

A proved case of primary actinomycosis of the stomach with metastasis to the liver, reported by Alexander W. Blain, Detroit (*Journal A. M. A.*, Jan. 21, 1933), is apparently the second authentic case in the medical literature. A review of both the American and the European literature reveals no cases of primary gastric actinomycosis to have been reported in the United States and that in the six cases reported in the European literature only one survives strict diagnostic scrutiny.

Second-hand American tires are being exported to Serbia and Latvia to be made into footwear. Chiropodists over there ought to be kept pretty busy treating tired feet.

Philadelphia Daily News.

NECROSIS OF THE PANCREAS WITH CONGENITAL ABSENCE OF THE GALL BLADDER

WALTER S. SIEWERTH, M.D.
CHICAGO

Congenital absence of the gall bladder is a rather rare anomaly. Mentzer of San Francisco, in the issue of the Journal A.M.A. for October 26, 1926, reported fifty cases in his review, and he found one case in sixteen hundred necropsies. Bower, of Philadelphia, collected sixty cases from the literature, one case with a double liver, which is the rarest anomaly. He also states that in forty cases in which the gross appearance of the liver was noted, cirrhosis was diagnosed twenty-nine times, thirteen of the hypertrophic type, and sixteen of the atrophic type. Bower is the only writer in my review of this subject who referred to the pancreas in these cases. He stated that the gross appearance of the pancreas was mentioned in but twenty per cent. of the cases collected. In one instance the head of the pancreas was missing, in three others the gland was atrophic, in adults the pancreas in all instances was thickened or injurated.

Clinically, absence of the gall bladder is not of much importance except as it plays a part in the etiology of pancreatic disease. There have been many unsatisfactory explanations of the absence of gall bladder; among them, that it is due to fetal peritonitis, or luetic peritonitis in early life, or that it is associated with hare lip, cleft palate, anomalies of the ears and hands, but no scientific proof of any of these theories have been forthcoming, and in this case no evidence of the above conditions was present.

Case report. Mrs. E. T., female, aged 49 years, first seen September 16, 1932, at her home, complaining of pain and tenderness in the upper abdomen, with marked distress and eructation of gas. She stated that twelve days ago while in Canada, she had a severe attack of abdominal pain with vomiting, for which hypodermics of morphine were necessary. This did not make her comfortable but it was not considered an emergency surgical case at this time. She returned to her home in Chicago.

Past history. Frequent attacks of nausea and vomiting all her life. Difficulty in feeding as a child. Nausea and vomiting every week for past four years. X-ray of gall bladder four years ago after the ingestion of dye showed no dye entering the gall bladder, so at that time a diagnosis of pathological gall bladder was made. No operation at that time or at any time since.

Marital history. Married, no children, no miscarriages. Menstruations normal. In menopause at this time.

Family history. Mother died of carcinoma of the pancreas, aged 82. Brother died of heart trouble, aged 59. Father died of apoplexy, aged 75. Three sisters living and well.

Habits. Regular. No alcohol. Could not eat rich foods. Bowels regular. Housewife. Had been a nurse.

Physical examination, September 16, 1932. A well nourished woman aged 49; 5 feet, 5 inches tall, weighing about 175 pounds, who is quite ill with pain and tenderness of the upper abdomen. Temperature 98; pulse 94; respiration 26.

Head: Scalp negative.

Nose negative.

Eyes: Cornea very slightly icteric. Pupils equal and react to light and accommodation. No paralysis. No ptosis. No squint.

Ears negative.

Mouth: Teeth good. Tonsils normal. No sepsis. Pharynx normal.

Neck: Movements normal. No glands, no goiter.

Chest: Large feminine chest; no scars; breasts normal, no masses.

Lungs: Apices and bases movable, expansion normal, tactile and vocal fremitus normal. No rales, no consolidation, no flatness nor any evidence of pulmonary pathology.

Heart: Right border out a little; slight enlargement of heart; systolic murmur over mitral area, constant in character and also heard in the left axilla; no arrhythmia and rate normal. Pulse regular, 86 beats per minute. Blood pressure: systolic 140, diastolic 80.

Abdomen: Marked tenderness over entire abdomen with distention and tympanites. Tenderness more marked over upper right abdomen but no rigidity. Mass was outlined on the right side corresponding with the liver and this dullness extended almost to the umbilicus and over to the left of the mid-line about 3 fingers breadth below the margin of the lower ribs. Spleen was not palpable. Complained of severe pain in the back of the abdomen as if from pressure.

Inguinal region: No glands, no hernia, no masses.

Extremities: Both upper and lower extremities did not show any abnormalities nor any glands.

Back: Nothing could be seen on the back; no redness or evidence of bone pathology.

Vagina: Normal, uterus of normal size; no tumors; no tenderness; no bleeding; cervix normal, position good.

Rectum: No ulcers, no hemorrhoids, no fissures, no tumors, no structures, no prolapse.

Reflexes: All reflexes were normal; no rhomberg; no ataxia.

Diagnosis at this time:

1. Low grade suppurative cholecystitis with
2. Hepatic phlebitis with probable abscess of the gall bladder and liver.

Differential diagnosis: We considered

1. Malignancy about the biliary ducts or the pancreas;

2. Chronic cholecystitis with hypertrophic cirrhosis of the liver;

3. Cyst of the pancreas;

4. Acute pancreatitis was not strongly thought of because of the length of time of the illness and the very slight temperature, slow pulse, and in general did not present the picture of an acute surgical abdomen at this time.

Consultation with other staff members was held and the conclusion was: Cholecystitis with enlarged liver; but advised waiting and observing the case until such a time as more definite findings would present themselves to warrant surgical intervention.

Course:

September 16, 1932. Flat x-ray was made of the abdomen because patient could not retain the dye and was too sick for the intravenous administration of the dye. Report of the roentgenologist's x-ray examination of the region reveals no evidence of abscess formation nor of a gall bladder shadow. Liver shadow is enlarged in all directions. No evidence of stones in region of the gall bladder. Both diaphragms are obliterated and both costo-phrenic angles are obliterated. Lung fields are normal in appearance.

Laboratory Findings:

W.B.C. 12,900; 84% neucrophils, 11% S. lymphocytes, 2% eosin. R.B.C. 2,990,000. Hemoglobin 60%.

Wassermann negative; Kahn test negative.

Urine: 1030, acid, clear, albumin positive, no sugar, few coarse granular casts.

September 17, 1932. No sedatives of any kind were given for the next three days. Patient felt better after several high enemas and was kept under observation until the night of September 19, 1932, which was a period of three days running a temperature from 98 to 100, pulse 100 to 90, respiration 26 to 28, until the night of

September 19, 1932, 9 P. M.:

Temperature 101.4, pulse 110, respiration 24. Pain more severe; tenderness more marked. Abdomen again showed distention. Nausea and vomiting after three days of retaining food. Case was now considered one for immediate surgical intervention, still under the impression that it was a gall bladder case.

Operation: Exploratory laparotomy September 19, 1932, 10:50 P. M. to 11:35 P. M. Gas-ethelene-ether anesthesia.

Surgical procedure: Right rectus incision to the peritoneum. Peritoneum studded with yellowish white areas the size of a match head and of the appearance of pancreatic digestion. Inside the peritoneal cavity, there was fat necrosis all over the peritoneum and omentum. Liver not enlarged, but bowel and omentum all adhered together, giving the impression of an enlarged liver on external examination. Gall bladder region explored and the gall bladder felt normal. No stones felt. Gall bladder was not seen because of adhesions. (This undoubtedly was the soft Spigelian lobe of the liver which was felt; it being the exact size of a normal gall bladder on postmortem examination.) Pancreas was very much enlarged, at least six to seven times its normal size, and very hard throughout the entire organ. In exploring over the mesocolon a soft area was encountered which broke and four cupfuls of dirty grey necrotic material was scooped out of the abdomen. Abdomen sponged out and three guttapercha cigarette drains inserted into the abscess cavity. The incision closed in the usual manner with three silk worm gut rentention sutures in the skin and fascia in addition to other sutures.

Condition of patient. Immediate condition good. Patient put to bed in the semi-Fowler position with the usual post-operative orders—rectal fluids, etc.

Pathologist's report: September 19, 1932: Necrotic homogeneous pink staining material in which no definite structure can be identified.

October 10, 1932: Piece of tissue picked out of the wound during a dressing and sent to the laboratory for examination. Report: "Necrosis of tissue is so advanced no cellular structure can be identified."

Course and progress of the patient. Patient ran a stormy course with wound draining well. Temperature ranging from 99 to 100—102 occasionally—until the day of expiration when the temperature rose to 106. Respirations 20 to 24 per minute. Drainage profuse throughout.

Urine: Frequent urinalyses showing trace of albumin and at times a trace of sugar. From October 18 to November 2, 1932, acetone was present in the urine.

Blood-sugar, October 19, 1932: 149 mgs. per 100 cc. blood.

Gastric Contents, October 20, 1932: Bile positive; blood positive; mucus positive; no fat.

Appetite poor. Never wanted food.

Vomiting: Would vomit almost continually the last ten days, even after stomach lavage. Duodenal tube was put into stomach but failed to get out of the stomach as shown by the back flow and also by the return of the methylene-blue dye which was used.

Patient expired November 2, 1932, six weeks after operation.

Postmortem findings: External examination reveals a white woman about fifty years of age who appears pale and thinner than normal and who is slightly jaundiced. The breasts show old hyperdermoclysis scars; the abdomen shows a right rectus scar in the upper right quadrant about eight inches long with a draining sinus at the upper end. Postmortem incision was made and the abdomen opened. There was one inch of fat in the abdominal wall, the recent operative incision had closed at the skin, but was unhealed underneath; the muscles were necrotic and separated. Abdomen was opened and revealed the omentum up around the liver and stomach and was fatty and studded with white necrotic pea sized masses; the peritoneum was bluish grey and studded with white soft necrotic masses.

Stomach, duodenum, jejunum, ileum, colon, all appeared normal except for congestion, distention and adhesions.

Uterus, tubes, ovaries, broad ligaments and pelvis were negative.

Liver was pale, soft and granular and slightly en-

larged. The Spigelian lobe was soft and about the size of the gall bladder. The hepatic, cystic and common ducts were traced and no gall bladder could be found, nor any scar tissue which might previously have been a gall bladder. There were two hepatic ducts, both entering the liver, neither one larger than the other and both fusing to form the common duct.

Lesser peritoneal cavity was massed together by adhesions and was filled with greyish necrotic pungent material in which a hemorrhagic, necrotic pancreas was apparently floating without any visible attachments, and was easily picked out, and on cut section was entirely necrotic throughout, no normal tissue could be found anywhere in the entire organ. The posterior portion of the greater peritoneal cavity was filled with the same necrotic material.

Intestines: The small bowel was adherent and the mesenteric glands were soft and necrotic.

Pylorus: No organic structure or pressure obstruction was present. Spleen and kidneys were not examined, and the chest was not opened.

Anatomical diagnosis:

1. Necrotic abscess of the pancreas with hemorrhagic pancreatitis.
2. Congenital abscence of the gall bladder.
3. Chronic hepatitis.

COMMENTS

1. The case had many clinical findings of a gall bladder case.
2. Normal blood sugar and no urinary sugar for five weeks.
3. Undoubtedly this case started as acute pancreatitis, then an abscess of the pancreas, and finally, acute necrosis of the pancreas.
4. We must have felt the Spigelian lobe of the liver at the time of operation, it being about the size and shape and consistency of the gall bladder.
5. Did the absence of the gall bladder play any part in the causation of the pancreatic disease in this case?

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TRANSPLANTATION OF EXTERNAL BILIARY FISTULA INTO THE DUODENUM

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Taking into consideration that medical literature reports only a limited number of cases of successful transplantation of postoperative biliary fistula, I thought it worth while to describe one operation which proved satisfactory.

The patient, W. P., 60 years of age, entered the Evangelical Deaconess Hospital December 27, 1928, with a history of slowly developing painless jaundice, for the past four months. General examination revealed marked emaciation and general jaundice, with old and recent scars on the skin due to scratching. Eyes normal to L and A. Somewhat injected throat; teeth in poor condition. Marked bradycardia. Liver three fingers below costal margin. A large mass was palpable and extended to the middle distance between the umbilicus and symphysis. This mass followed the respiratory movements, was circumscribed, fluctuating and painful. Defecations were completely acholic. Urine; plus-albumin, no sugar, full of bile pigment and dark colored. Blood: erythrocytes, 3,000,000; leukocytes 8,100; no eosinophils. Wasserman and Kahn, negative. Coagulation: 8½ minutes.

Diagnosis: Chronic obstruction of the common duct caused by chronic pancreatitis or carcinoma of the head of the pancreas.

The patient received, with the routine pre-operative preparation, three intravenous injections of 10% calcium chloride in 10 cc doses. Operated on December 31, 1928.

The abdomen was opened with a right upper rectus incision, under novocain and ether anesthesia. (Spinal anesthesia was not considered safe because of possible bleeding into the spinal canal). The stomach and duodenum were found normal. Liver enlarged and the pancreas head presented a nodular mass. The gall-bladder was immensely distended, reaching two inches below the umbilicus and covered with adherent omentum. During the delivery of this pint-bottle sized gall-bladder, it ruptured at the neck involving probably the dilated cystic duct itself. After this accident, the gall-bladder was removed. The stump of the cystic duct was ligated. The choledochus was explored and found greatly dilated. No stones were palpable, but several hard glands were present. Choledochotomy was done and probing of the duct toward the duodenum revealed an impenetrable resistance. A T-tube was inserted into the duct and the abdomen was closed with

three cigarette drains. A diagnosis of carcinoma of the head of the pancreas was made.

The patient made a stormy recovery because of a deep trychophytosis (Kerion Celsi) which developed on the occiput. This was opened, curetted and cauterized; and, parallel with the clearing up of the jaundice, it healed. The T-tube was removed four weeks after the operation. The patient left the hospital March 5, 1929, draining large quantities of bile through the established fistula. From the time of his operation he had gained 19 pounds.

He was expected to live from six to eight months longer and during this period be relieved of itching and be comparatively free from pain. However, he improved very steadily, gained weight and worked during most of this time in a Wisconsin Lumber Camp. His only worry was what to do during the winter, when inclement weather and hard work would make it awkward for him to change his bile-soaked dressings. In view of his clinical improvement and the necessity of his working for a living, it was decided to abolish the biliary fistula by transplantation into the stomach or duodenum.

He reentered the hospital June 26, 1929, in good general condition, except for a trace of sugar in the urine. His blood sugar was 135 mg. per 100 cc., erthrocytes 4,200,000 and leucocytes 9,000. A second operation, under spinal anesthesia, was undertaken June 28, 1929. A catheter was inserted into the fistula and fastened to the skin with silk. The abdomen was opened medially from the old scar. Diffuse membranous adhesions plastered part of the stomach, duodenum and omentum in one mass to the inferior surface of the liver. After freeing the duodenum one could trans-palpate the head of the pancreas which presented a markedly enlarged, irregular, nodular mass. Feeling the density of the scar tissue along the hepato-duodenal ligament, we did not attempt a dissection of the lower part of the common duct. The fistulous tract which was easily palpable with the catheter inside was coned out. An oblong block of scar tissue was left around the external opening. Farther down we employed circular dissection, going 1 cm. beyond the edge of the liver.

Then we amputated the skin from the oblong block of scar tissue left at the external end of the fistula's tract. By trimming the remaining part of this scar tissue, we prepared two opposite flaps with double armored sutures with which we slipped the fistula into a 1½ cm. opening of the nearest situated part of the descending duodenum. The sutures were brought from inside to outside, through the edge of the duodenal incision and were tied as mattress-sutures.

With a few double-O catgut sutures, the edge of the duodenal opening was fastened to the fistula's tract circularly. A small tag of omentum was used as reinforcement against possible leakage. The abdomen was closed with two cigarette drains. The patient who had been ordered to discontinue bile tablets one week prior to the operation, and had acholic stools, on re-entering the hospital, now had well-colored defecation following an enema on the second post-operative day. His recovery was uneventful and he left the hospital July 17, 1929.

He reported to my office once every month that he had normal colored stools. His only complaint was an occasional dull pain in his back. In March, 1930, he came complaining of weakness, drowsiness and thirst. There was no icterus present. He had lost five pounds in weight and his urine showed 2.4% sugar and 3 plus acetone. The stools were brown. He was not able to stay in the city for sugar tolerance determination, so on May 26 he returned to the hospital for this purpose. At this time he also complained of pain in the epigastrium and over the right lumbar region. He was frequently nauseated, had vomited twice during the past week and had lost 25 lbs. in weight.

On June 10, 1930, he left the hospital with a sugar tolerance of 230 gm. of carbohydrates. He returned to work, but in his letters to me he said that it was getting increasingly difficult for him to perform his duties as watchman and finally he re-appeared in my office. On this visit he complained of boring pains in the epigastrium and in the back. I found his urine loaded with sugar.

Subsequently, he went to Minneapolis and later I received a letter from Dr. Dixon of the Mayo Clinic, in which he stated that the patient had 1.7 mg. bilirubin in 100 cc. of blood and his blood sugar was 140 mg. per 100 cc. The last letter I received from this patient was three months later. He wrote that he had developed a "sore toe" and asked for advice. I urged him to see a doctor. After repeated inquiries I failed to get an answer. Later a friend of his communicated with me and said that the patient had undergone an operation on his foot and died.

This patient had a carcinoma of the head of the pancreas with total obstruction of the lower common duct. At the time of his first operation, a cholecysto-gastrostomy should have been done, but following the above described cause it was not deemed feasible and external drainage was used to relieve the jaundice. The choledochoduodenostomy was not done, because the patient's condition required the shortest and least severe operation.

A second operation very successfully abolished the external biliary fistula and the patient lived 18 months without having been troubled with jaundice. Finally the cancer of the head of the pancreas invaded the caudal part of the gland and probable destruction of the islands of Langerhans caused the diabetes with its consequences.

In the literature, I have found reported, up to date, 25 cases of transplantation of external biliary fistulae. Dr. H. Williams[13] was the first to perform this operation successfully. Lahey[3, 4, 5] reported 8 cases with 2 deaths. Lilienthal,[6] Barber,[2] St. John,[9] Roeder,[7] Waugh[12] and Bani[1] each reported one case;

Walters[10, 11] reported 8 cases and N. Soroko[8] reports 2 cases from the Feodorov Clinic. All the authors have the impression that this operation is technically easy to perform and the dangers connected with it are no greater than by other operations for reconstruction of the extrahepatic bile ducts.

Relative to technic, Lahey[4, 5] pointed out that apparently the only important fact was to leave sufficient tissue around the fistulous tract and that dissection should not go farther than the edge of the liver. Keeping in mind these two factors, the blood supply of the transplanted tract will not be impaired. Sloughing and the collapse of the implanted tract will be prevented.

After cholecystectomies, where for some reason a permanent external biliary fistula remains and where a secondary operation (the choledocho-gastrostomy or duodenostomy,—or hepatico gastrostomy or duodenostomy) could be accomonly by facing extreme technical difficulties, it seems to me that the transplantation of the fistulous tract into the gastrointestinal canal should be considered more often than it is.

This operation is technically much easier to perform than it is to handle the extra-hepatic ducts for this purpose and the dangers or postoperative complications are apparently no greater. The transplantation of an external biliary fistula is advisable only in such cases where it is evident that the fistula effectively drains the common or hepatic ducts.

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HEALTH EXAMINATIONS OF COLLEGE STUDENTS*

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The idea of health examinations for college students has been in force for many years particularly in some of the Eastern schools. It has increased in scope particularly in the larger universities where the health service undertakes to furnish if desired complete medical attention to the administrative, faculty, domestic and artisan groups as well as the students. At first in the larger men's schools health care was given especially for those favored representatives of the institution on the athletic fields, particularly the football and crew men. Where the student body lived mostly in dormitories or halls on the campus it was early found essential to provide some means of caring for the ill ones of the group particularly with reference to epidemics. An infirmary service soon became an integral part of the equipment. Those students who lived off the campus had to depend pretty much on the care of their landladies, go to a hospital, or go home. One of the functions of the dean of one school is recorded as being nurse for some sick students in rooming houses in a college town.

The general increase in the interest in the physical condition of the students is prompted not only by humanitarian reasons. The college accepts a certain responsibility from the parents for the care of the boy or girl for nine months of the year. This applies to all types of institutions but is particularly true where living is in the building, in halls and dormitories and practically all the student's time is spent on the campus.

Greater interest in physical education, increased facilities and equipment for exercise including swimming make it not only advisable but necessary that there be an adequate

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inventory of physical status before entering these activities. Furthermore intramural as well as intercollegiate competition now demand that representatives of hall, class or college be in shape to compete. The responsibility for this has now by rather common acceptance been delegated to the college.

This paper presents a report of health examinations of students at MacMurray College for the past ten years. Examinations were conducted during the two previous years but did not cover the majority of students and were not supported by records that could be adequately analyzed. All examinations were conducted by the writer except in 1930 when Dr. W. H. Weirich divided the work.

The inception of the work was in a conference eleven years ago with Miss Austin, the former dean, Miss Miner, the college nurse, and Miss Boyd, at that time head of the Department of Physical Education. The support of Presidents Harker and McClelland, Deans Austin and Hawkins, and Registrar Metcalf over this period has been much appreciated. Miss Miner has helped with the examinations and the conclusions have been cleared through her office. There have been four heads of the Department of Physical Education in this time, Miss Boyd, Miss Thurston, Miss Rearick and Miss Bass. The real work and responsibility has fallen on them and on their assistants and senior students as will be shown below. It would never have been possible to carry out the details of a plan which has apparently worked in a fairly satisfactory manner without the great help that these people have given so freely. The staff and senior students of this department give practically all their time during the first two or three weeks of school to scheduling, making and recording the results of various physical measurements as well as assisting in the medical examinations.

As soon as possible after college opens appointments are made for first, freshmen, then members of the other classes to have the first set of observations taken by the personnel mentioned above. The student entering college is given a blank set of cards. The previous years cards are given to the returning girls. The report of the home physician is attached to the card if any positive findings or recommendations are made thereon. Space for a simple medical history that will give pertinent facts is provided. This history is supplemented in the first interview with the physical education people as well as at the time of the medical examination.

Height, weight, comparison of this with the normal, lung capacity, chest expansion, general physical make-up with special reference to body mechanics and posture are noted. This gives really quite a comprehensive picture when these findings with the history are reviewed when the student appears before the physician. If variations from the normal are found here they give leads to what to look for. One can grasp in two minutes what has required the effort of several people for that time multiplied ten or twenty fold.

Appointments for the medical examiner are scheduled in the evenings as a matter of personal convenience to him. This means overtime work for everybody but appears the best way to expedite things and get classes organized. The team for general examinations in order of contact with the student consists of one or two physical education majors as clerks to arrange cards so they will be available, a member of the department staff who takes pulse readings, recording clerks, one or two nurses and the physician. Students come to the gymnasium, are given their cards, disrobe, have their pulse rates taken at rest, after exercise, then after two minutes rest, then come into an adjoining room for the general survey.

The history and physical measurements are scanned, additional facts or comments dictated. The blanks provide spaces for notes on throat, thyroid, heart, lungs, blood pressure and abdominal findings with additional spaces for any special feature. The procedure now in use is to make abdominal examinations on all freshmen and on all others on whom positive findings have been noted or who have had some change in their history since previous recording. It has served to speed things along by setting aside some evenings for nothing but abdominal examinations, using this opportunity for more special studies in the cases where these are indicated. Urinalyses are requested on all cases of organic

heart disease and hypertension or where something in the history or examination suggests the advisability of this.

It should be borne in mind that the primary function of these examinations is the gradation of girls *well enough to come to college* as to capacity to participate in the physical education work required and to enter the swimming pool. Students are classed as suitable for:

1. General participation and swimming.
2. Modified participation and/or swimming.
3. Corrective classes with recommendations for type of corrective work.
4. Individual corrective work as in three.
5. Walking.
6. Rest.

As a rule the recommendations are made at the time the examination is completed unless additional checking is necessary later. No treatment is prescribed. Those in need of medical attention are referred through Miss Miner to their physicians. The recommendations of the girl's own physician in regard to either restriction or increase of activities have been accepted as the primary basis and the examination results taken as secondary always. It is desired to stress this point as the names of many physicians from all parts of the country are found on the preliminary examination blanks as furnished by the girls.

The results over this ten year period cover 3120 examinations of 1752 girls. Girls now receive an examination each year in their college course. Curriculum changes now provide that students entering under the terms of the 1930 catalogue, unless excused by medical certificate, take four years physical education work and must be able to swim in order to graduate. This means a well rounded program of physical education for every student. Those students who by reason of physical defects are barred from general participation secure their credits in one of the remaining five categories listed above.

TABLE I

Year	Number examined	Class 1	Classes 2-6	%
1923	254	229	25	10
1924	261	225	36	14
1925	286	237	49	17
1926	290	225	65	22
1927	288	234	54	19
1928	314	261	53	17
1929	277	226	51	18
1930	425	371	54	12
1931	397	342	55	14
1932	338	295	43	13
Totals	3120	2635	485	15 Average %

The tabulation by years is shown in Table 1.

This tabulation and material for the class group in Table 2 could not have been made without the helpful assistance of Mrs. Alice Agger of the Department of Physical Education.

It was at first somewhat difficult in the analyses of the figures of the various years to explain first the jump in percentage in 1926 and second the lowered figures for the last three years. Study of the charts revealed, however, that for the first group there was a definite increase in the restrictions for abdominal conditions as those examinations were instituted more generally then. The explanation for the lowered figures for the last three years lies perhaps in extension of types of courses offered and possibly in somewhat generally better physical condition of girls entering college. The preliminary medical examination by home physicians now being required for entrance may have also something to do with this.

Restrictions vary greatly, of course, in their clinical classification for groups two to six. The first three in order of frequency are chest conditions (diagnosed mainly as arrested, inactive or suspicious tuberculosis), organic heart disease and hyperthyroidism. Chronic appendicitis, post-operative abdominal conditions and pelvic disorders make up the next largest group. Diagnoses of various scattered conditions are responsible for a few limitations each year.

The classification for correctives by years is shown in Table 2.

Every year the diagnosis of arrested, inactive or suspicious tuberculosis runs almost

TABLE II. CLINICAL CLASSIFICATION FOR CLASSES 2-6 BY YEARS

CONDITIONS	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Chest	8	8	13	17	14	11	9	13	11	16
Heart	9	8	17	18	15	18	17	12	14	9
Thyroid	5	5	4	7	6	12	14	18	13	8
Chronic appendix	0	3	2	8	8	5	4	1	1	1
Pelvic disorder	0	2	1	2	0	0	0	0	2	2
Post-operative	0	4	4	5	4	2	2	1	5	1
Post-infectious	1	1	1	0	0	0	0	0	0	0
Arthritis	1	1	0	0	0	0	0	0	0	0
Old poliomyelitis	1	1	0	0	1	1	1	2	1	0
Splenic anemia	0	1	0	0	0	0	0	0	0	0
Back disorder	0	0	0	0	0	0	1	4	2	2
Urticaria and angio-neurotic edema	0	2	2	2	2	0	0	0	0	0
Lymphadenitis	0	0	1	0	0	0	0	0	0	0
Hypertension	0	0	1	0	0	1	0	4	3	2
Otitis media	0	0	2	2	2	2	0	0	0	0
Gall bladder disease	0	0	0	1	0	0	0	0	0	0
Sinusitis	0	0	0	2	2	2	2	0	0	0
Post encephalitis	0	0	0	1	0	0	0	0	0	0
Purpura	0	0	0	0	0	0	0	0	0	1
Anemia	0	0	0	0	0	0	1	0	0	1
Nephritis	0	0	0	0	0	0	0	1	1	0
Overweight	0	0	0	0	0	0	0	0	2	0
Totals	25	36	49	65	54	54	51	54	55	43

equal to or ahead of the others. This is in keeping with the findings of Chadwick, Opie and others. Several times a positive open case has been found in the freshman class. Two of these instances were in daughters of physicians. Such findings are reported to the Dean's office and the recommendation made that these girls leave school at once. So far as records and memory indicate there has been during the ten year period one instance of active tuberculosis develop during the college year. That particular case was found at examination to have an old thickened pleura; later, after a bronchopneumonia, developed pleurisy with effusion due to tuberculosis. That there have been other cases develop after leaving school for one reason or another is readily recognized in view of the statistical frequency of tuberculosis but there is no way to check this up. Girls in whom there is definite evidence of former activity are placed in groups five or six.

The classification of restrictions depends obviously on the degree of disability as well as the diagnosis. This is well shown in the large and important group of organic cardiac disorders. There are and have been girls majoring in physical education who have a heart lesion. There are and have been others with the same diagnosis but who put in rest hours for their credit in this department. Some others are in the grades of greater activity. The functional capacity as shown by the vital capacity test, the response to exercise and the general estimation of the power of the myocardium and degree of compensation are the criteria for decision.

Some girls are restricted only from diving, some from diving and swimming because of a chronic otitis media or sinusitis. Such girls take part in all other activities. A few who have learned to swim before developing some type of pathology have the privilege of taking plunges but are restricted from any competitive work in the pool, on the field or in the gymnasium.

If one class is followed through there are some interesting findings with regard to those who stay in college and those who drop out. The freshman class entering in the fall of 1930 was a large one but as with many colleges in the last few years suffered a considerable drop. This was the first class to enter under the new catalogue ruling, hence it has some interest. There were 251 freshmen examined; 19 of these were graded for corrective. Ninety-six of the 251 returned for the sophomore year; 13 of these were in corrective both years, one was added to the corrective group following a pneumonia in the late spring. This year 58 returned as juniors. Two of these have been in corrective all three years in college, four have been in for two years and four were added to the

corrective group this year. All but two of the girls who have joined the corrective group since the first year have had either some severe acute infection or an operation. It would appear that two inferences may be drawn. One is that most of the girls who have some definite disability drop out by the end of the second year as only two of the original nineteen now remain; the other that acute infections, rather than overstrain, are more responsible for limitation of activity.

The objective of the College and of the department is to provide some type of physical exercise for every girl. While eighty-five per cent. of the girls are considered able to take part in all activities, the other fifteen per cent. are the ones to whom much special and individual attention is given.

Classification of minor defects, especially postural defects, which can mar a girl's whole appearance, is not attempted in this medical selection. Nevertheless grading of posture and body mechanics is carried out as shown on the blanks. The general classes as well as the corrective classes give work to improve posture and grace and to overcome the "debutante slump." It is of interest to note in the girls who remain on for more than one year the improvement when seen at the time of their later examinations. Such improvement is observed in the carriage and figure as well as noted on the records. This is corrective work that includes all students whether in the eighty-five or the fifteen per cent. groups. It is in the writer's opinion one of the definite advantages of a college education in an institution where attention is given to this important feature.

Individual and class work of corrective type is available for groups two to six and for some of group one who may need special attention. Recommendations for the various exercises, chest, abdominal, back, leg, arm, Schott for cardiacs, massage, corrective swimming are made as a result of either the first general or more detailed re-examination if necessary. Results of this sort of therapy combined with general hygiene of the regular life of school have been gratifying. It is understood of course that organic defects existing prior to entrance cannot be removed unless an operable condition exists. A girl entering under such classification and put in corrective work is apt to stay in that category throughout her college course. Nevertheless much can often be done in the way of physiotherapy to help that girl from the physical standpoint and what is more important to help her mental attitude, to keep her from that bane of all educational institutions the feeling of being "left out of things." Furthermore there is the important group of functional disabilities who may after a period of greater or less length of corrective training "graduate" into regular participation.

It may be well to consider the possibilities of a reversal of the picture. The question is often asked by parents, and a positive statement has sometimes been made by doctors of the dangers of general participation. The control over student health, the possibility of overstrain, the danger of some undiscovered condition developing after examination and classification, do not come strictly within the province of this paper. Yet they must be and are considered. Scarcely a week during the college year goes by without reference being made to the condition of some girl. Most of this is handled through the college nurse and the Infirmary. The examination records are available for comparison. The findings of any physician are taken into consideration without consulting this writer. The general plan of arranging the type of work suitable for the individual girl is followed as outlined above.

An acute infection may change the picture within a short time as shown in the tabulation. A case in point is that several years ago a major in the physical education department contracted typhoid fever in the summer vacation between her junior and senior year. When she returned to college a definitely overactive thyroid was found which necessitated her changing courses. Last year a freshman who was in excellent condition in the fall developed an organic heart lesion after an attack of pneumonia so that now she is on very limited activity.

The records do not show many changes in classification unless some intercurrent condition has set in. On the contrary tendency to improvement in physical condition is the rule. There are a few cards that show mis-

classification in the way of diagnosis of thyroid activity. A thyroid status apparently considered as normal later turned out to be overactive with resultant necessity for limitation of physical exercise.

An example of the value of the preliminary measurements is shown in a case under this heading. L. C. was examined in the fall of 1931, vital capacity was 174 cu. in., a full thyroid was noted on physical examination, all other findings normal. She was put in Class 1 and apparently carried on throughout the college year without difficulty, taking general gymnasium. Her health history this fall (1932) was that she had not been so well this summer, had felt tired the latter part but determined to return to college. On inspection of the record at the time of the physical examination a vital capacity of 154 cu. in. and a positive exercise test response was seen. As vital capacity is a function dependent on height rather than weight such a drop as this coupled with the failure of the pulse rate to come back to near normal after rest led to the presumptive conclusion of thyroid overactivity even before physical findings were noted. These showed a full thyroid, a systolic murmur transmitted to the axilla, pulmonic second sound accentuated, and a blood pressure of 148-82. Obviously this girl needs rest rather than activity in order to enable her to stay in college at all.

While clinical problems such as these are of great interest to the examiner the chance to see quite a large number of normal individuals, to review normal physical findings means much more. Practice in the technique of physical examination is always of value. Consequently such an opportunity as these examinations is welcomed.

No conclusions that could be generally applicable can be drawn from this report. This series of examinations over a ten year period shows that about fifteen per cent. of the girls in MacMurray College have some findings in their physical examination that call for corrective management ranging from rest to slight restriction from full participation. Some of these conditions are remediable, some are permanent. An attempt is made to rate the students' physical capacity and apply through proper methods those measures of management which will enable the individual student to improve her general health. These measures with the general program for class 1 students provide systematized physical education in one way or another for every student in MacMurray College.

PAIN IN RECTAL DISEASE*

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Pain is one of the ever present symptoms of rectal disease. It may be spoken of as but a discomfort or it may be agonizing suffering; it may vary in constancy and severity in different people or at different times in the same individual; it may be limited or widespread; and it may be direct or reflex; it occurs with all rectal ailments from a simple proctitis or a benign ulceration to an extensive neoplasm; and unless relieved it drives our patient to distraction, disturbing his peace of mind as well as his bodily comfort, interrupts his sleep, upsets his digestion by causing nausea, vomiting, flatulence, diarrhea or constipation, and thus directly interferes with convalescence. In many rectal ailments, notably cancer, the discomfort is slight at first but, later becomes torture, and even in lesser ailments such as hemorrhoids or fissure, the suffering of the present attack may be violent when earlier attacks have been accompanied with bearable pain.

For purposes of our present study let us classify the pains of rectal disease as

1. Visceral Pain
2. Referred Pain
3. Spasmodic Pain
4. Backache or Sacralgia.

New growths in the rectum obstruct the lumen of the bowel, or distend its walls; inflammatory lesions engorge the blood vessels of the parts and further fix and stretch the parts; and adhesions between the pelvic organs augment the tensions in the rectum by the binding and pressure of new fibrous tissue. Therefore deep seated pain is aching in character, continuous and constant in duration, and as the venous engorgement, the tension of the adhesions or the infection increases, the pain proportionately increases. It is elicited by pressure and is also made worse thereby. This visceral pain may be complained of in the abdomen in the form of colic.

Colic is a word used very loosely to describe any abdominal pain, especially of a kind which tends to wax and wane in intensity. Such pain may be associated with disease in almost any of the abdominal or pelvic organs. The word colic is applied quite commonly to the pain caused by the passage of irritating substances in the bowel although it may also refer to the passage of a stone down the bile duct (biliary colic) or the ureter (renal colic). It is better, however, to restrict the term colic, used without the qualifying adjective, to pain caused by contraction of the intestine, of a cramp-like nature, in an effort to rid itself of foreign body or poison.

As soon as the reflexes are excited by the rectal irritant, regardless of whether it is an inflamed anal fissure, an engorged hemorrhoid, an infected rectal ulcer, a dragging neoplasm or an impacted fecal ball, nature increases the peristalsis in an attempt to rid itself of the offender, and in this effort painful spasm of the bowel occurs. If these colicky contractions are forceful, vomiting, sweating and a degree of collapse is brought about with this digestive upset, above (cephalad) to the diseased rectum. The patient's temperature and pulse are not much disturbed and though the face exhibits an expression of pain, there is not the pinched, anxious facies so characteristic of grave rectal disease. In cancer of the pelvic bowel the obstruction may be but relative, the lumen being temporarily plugged by a passing fecal mass, the digestive upset promptly subsides, local tenderness and rigidity disappear and the clinical picture may be mistaken for that of simple colic or colitis.

Pain in the left hypochondrium may occur with a growth in the splenic flexure of the colon, or obstruction of it lower down. In some cases a tumor may be felt or signs of chronic obstruction be noted. Apart from a neoplasm, the mere accumulation of feces in the transverse and descending colon may cause a feeling of pain and weight in the left hypochondrium.

Carcinoma of the sigmoid colon or of the rectum may cause pain in the colon generally, owing to its distention with accumulated feces; sometimes this pain is complained of chiefly over the decending colon, and in the left iliac fossa. There may also be pain in the right iliac fossa occasioned by adhesions obstructing the sigmoid colon, or a partial volvulus, or a carcinoma of the rectum, or of the sigmoid colon, leading to partial intestinal obstruction and preventing feces from leaving the cecum thoroughly even when evacuant measures have been employed. The pain which the patient complains of may be not at the site of obstruction so much as in the right iliac fossa. It is noteworthy that when there is obstruction to the colon in its distal part, it is particularly in the cecum that stercoral ulcers are apt to occur, and these may be associated with perityphlitis and pain in the right iliac fossa, more or less simulating appendicitis.

Pain in the perineum is a symptom often mentioned by patients in giving their history of some affection of the genito-urinary organs, rectum or anus, but is usually only a dull aching, of which little notice is taken, as it is generally of minor consequence in comparison with other more striking symptoms. The complaint of perineal pain per se does not convey much information to the clinician, and it is practically never present as the only symptom in a case.

Referred pain of pelvic disease into the lower extremity is not recognized so often as is that of cardiac disease in the upper extremity. Disease of the rectum, bladder, prostate or uterus may, however, give rise to cutaneous pain and tenderness, chiefly in the fifth lumbar and sacral areas. A careful examination of the abdominal and pelvic viscera is necessary, therefore, in all cases of pain referred to the legs without obvious cause.

Superficial pain in the skin is essentially a referred pain, and may radiate very widely over the lower abdomen, down the groins, over the crest of the ilium and down the thighs. This area of the skin is commonly known as the "ovarian region" because referred pains are noted here in connection with uterine, tubal and ovarian disease, but this region may be involved in lesions of the colon and rectum and also the kidney, ureter and gall bladder. Consequently, referred pain in the skin in this region can be taken as indicative of disease in any one organ unless the influence of all other organs can be eliminated. All parts of this area are not necessarily affected equally, and there may be points of maximum intensity; one notably, is midway between the umbilicus and the an-

terior superior spine. This spot, especially on the left side, has often been taken erroneously to indicate pain due to ovarian or sigmoid inflammation. It is interesting to note that referred pain is commonly more marked on the left side of the body, the explanation of which is not quite clear.

Intestinal neuralgia is an uncommon disease and may be difficult to distinguish from colic as both are functional disorders without organic disease. Neuralgia may occur in an anemic, ill-nourished person of neurotic type, and may complicate the other pains of malignant or tubercular disease of the pelvic bowel. It arises without obvious exciting cause and may recur at the same time of the day with some regularity. The pain has not the cramp-like character of colic, but is aching, boring and darting.

Bearing down pain is an associate of many pelvic conditions. It is impossible in many instances to dissociate it from chronic aching pain; but it is not every chronic pain which has the bearing down characteristic. This dragging pain is usually the result of impaction of some pelvic structure, and owes its character more particularly to pressure on the rectum, and sometimes on the bladder. Displacement of pelvic organs, or even simple congestion of them, will sometimes produce it. Within the rectum its more frequent sources are cancer, ulcer or hemorrhoids. It is thus closely associated with rectal tenesmus. A pelvic abscess of peritoneal origin is an unusual impacted swelling which gives rise to very severe bearing down pain; impacted, because of the tension in it. The bearing down character becomes most marked if the abscess involves the rectal wall, as it so frequently does, causing a flow of mucus and much irritation of the rectum.

The differential diagnosis of the causes of this type of pain can be made only after a complete pelvic examination by abdominal palpation, and bimanual examination by the vaginal and by the rectal touch. Further, it may be necessary to examine the bladder by the cystoscope, or the rectum by the finger or the sigmoidoscope.

The pain occasioned by rectal disease in general and in cancer especially may be mechanical, or chemical or both.

1. *Mechanical*: The cancer cells are larger than normal cells of the same type of tissue and the increased volume content of the cells causes pressure upon the fine nerve fibrils distributed in the tumor thus causing nerve pressure pain. It is also possible that the increased volume of the cancer tissue may be the result of increased permeability of the cancer cells. Behan[1] suggests that this hydropic increase in size may be corrected to some extent at least by calcium, for he has noticed that under the administration of calcium the tumor becomes smaller. Thus, the increased volume content of the cells causing pressure upon the fine nerve fibrils in the tumor is reduced with reduction of nerve pressure and alleviation of the pain.

It has been observed that in cancer patients the blood serum contains less calcium and is changed in its potassium and chloride content, i. e., it contains proportionately more of these latter ions. It has also been demonstrated that slices of a transplantable tumor in an acid mixture imbibe water and that preliminary treatment with calcium solution restrained this imbibition. From the experimental standpoint, this is indicative that the volume of cancer tissue should be greatly decreased by calcium, and in the practical application would indicate the value of calcium intake as a means of reducing the volume-content of cancer tissue.

All rapidly growing tissues, whether cancerous or normal, as the embryo, the spleen, the testes, etc. have a higher degree of imbibition for water than have the slower growing tissues, and it is pertinent to remember that increased permeability is associated with the rapidity of growth of the normal tissues which most closely resemble cancer. Therefore, it may be accepted that increased volume of the cancer cells by reduction of cancer tissue volume does decrease the pressure pain.

Behan says:

> Abnormal substances, causing irritation of the terminal sensory fibrils result from variations in the chemical constituents both of the tumor cells and of the surrounding tissue juices. These changes are the result of tumor activity, chiefly metabolic. The most active metabolic process in cancer tissue is the glycolysis of sugar with the production of lactic acid, carbon dioxide and water. To what extent the lactic acid is involved in the irritation of the sensory nerve terminals and the transmutation of impulses so produced into pain impressions is not yet determined. However, it must be accepted as a fact that the pain production in cancer tissue is associated with irritation of sensory fibers in and

around the cancer mass, and it is conceivable that this irritation is closely associated with disturbances in osmotic pressure and electrolytic changes. Disturbances of this character as sources of pain production are quite conceivable, if we compare them with the severe pain produced by osmotic changes intentionally induced as, for instance, the pain caused by the hypodermic injection into tissues of solutions not isotonic with the plasma of the tissues. When the osmotic pressure of a solution is higher or lower than that of the tissues into which it is introduced, pain always results. So too, in cancer, it is conceivable that the metabolites of the cancer cells of which lactic acid is most prominent are factors in producing disturbing and irritating changes in the surrounding media, or even in the cancer tissue itself. These changes, which are deleterious and destructive to the tissues of the affected area, must at least in part be the causative agents of the pain produced in these regions; therefore, in order to influence, at its source, the pain of cancer lesions, it is necessary to control or to regulate the metabolism of the cancer tissues. As the metabolism of cancer tissue is predominately that of glucose, regulation of this actively will to some extent control the pain.

The pain of rectal disease, benign or malignant, is very moderate at first, the nerves are but gently irritated, but later as the tumor enlarges or as the infection spreads the tension and pressure are severe and the suffering is agonizing. Within the bowel the discomfort is a feeling of gas rolling about or colic; in the rectum a fullness or heaviness; in the perineum, of itching, burning or crawling; and in the pelvic structures a weakness, tired sensation or dull ache.

Treatment: Locally, for the backache or iliac discomfort, the belladonna plaster is sedative. Too large a plaster should not be used at once, as the atropine in the plaster can be absorbed and cause belladonna poisoning.

During the day while our patient is otherwise occupied the pain may be dismissed, but at night it interrupts his sleep and as slumber is our most refreshing agent it must be provided. Therefore as soon as our patient mentions restless, sleepless nights, his discomfort demands our immediate and constant consideration. Proctologic patients, if carefully interrogated, all complain of more discomfort at night. They cannot find a comfortable position or are soon awakened.

Tincture of gelsemium, 5 minims in a tumbler of hot water upon retiring is mildly depressant; it lowers the blood pressure, slows the heart and depresses the irritability of the spinal cord and nerves, both motor and sensory and is an especially efficient sedative. It is excreted rather rapidly by the kidneys and therefore is not cumulative or hang-over in effect. This drug, though very satisfactory, has lost popularity to the coal-tar derivatives, especially acetylsalicylic (aspirin), or the barbituric acid preparations (Sodii Barbital grs. 5). No one preparation is continually effective beyond a short period but as the number of official and proprietary hypnotics is legion, changes may be rung as frequently as needed.

When our patient's paroxysms of pain disturb his eating his meals a tablet of 5 grains of aspirin one-half hour before meals has a calmative effect that usually permits the invalid to ingest a substantial meal.

Many cancer patients come sooner or later to use codeine or morphine, and often in increasing doses; one of my recent patients used 3 grains of morphine daily.

The hypnotic and narcotic drugs are a great mercy to our cancer sufferers and must not be withheld. The judicious utilization of these drugs for the relief of symptoms is however always important. The matter of developing a habit is secondary.

The study of the chemical changes in the neoplasm itself, in the tissues of the host and in the components of the blood is bringing out some interesting information regarding calcium therapy as regards the cancer tissue and the control of pain.

Behan[1] reports some surprising results with calcium in reducing and in some instances completely alleviating the pain of those suffering with inoperable cancer. Calcium gluconate is used, 1 gram intravenously every day, or it may be given by mouth so that the absorption from the intestinal tract will provide a constant reservoir of supply. A larger dose (2 gm. of calcium gluconate three times daily) is necessary if given orally. In order to stimulate the absorption of the calcium, cod liver oil with viosterol is also supplied the patient. the dose being one-half ounce of cod-liver oil, in one dose, once a day together with ten drops of viosterol. If the calcium intravenously is going to be of benefit it will show results within five or six injections given over a period of a week or eight days. I have had a few reactions of chills and body tremor after the first injection of calcium gluconate.

No disagreeable effects of hypercalcemia were noted, although sometimes loss of appetite or slight malaise did occur. When these appeared the calcium given by mouth was immediately discontinued.

Sauerbruch holds that shifting of tissue reaction to the acid side induces leukocytosis and improved phagocytosis, and changes dissociation of calcium and potassium ions. Spiro[2] showed that calcium caused increased acidity and noticeable depletion of water content of tissues. Dubois and Stolte[3] showed that vegetable diet, rich in potassium, increased retention of calcium. Bogert and Kirkpatrick demonstrated that acid forming foods increased while base forming foods retarded calcium absorption and retention.

It should be remembered that vitamin D is a potent agent in the mobilization of calcium in the system and therefore such foods as egg yolk and cream should be given.

Ultra-violet irradiation causes an increase of the serum calcium in the blood. This may also explain the beneficial effect of this type of irradiation on pain. H. Humphries in "Artificial Sunlight and Its Therapeutic Uses" published by the Oxford Press, 1924, states that "it would appear that the ultra-violet ray exerts some biologic action in the vicinity of irradiated inter-epithelial nerve fibrils.

In whatever way relief from pain is brought about, and whatever may be the mechanism involved in effecting analgesia, it is an important therapeutic property of ultra-violet energy to allay pain, a property apparently little known and less used.

Extract of parathyroid gland will increase the calcium content of the blood and at the same time decrease the electrical excitability of the nerves. Berman, L. (A. J. Physiology, 65:358, 1926). The parathyroid extract markedly increases the ion-diffusible calcium in those in whom this form of the element is low.

Behan observed that parathyroid, when given to a patient, increased the serum calcium at the expense of the calcium which was present in the bones, and most enlightening in this respect was the observation that the only patients in whom bone metastases developed, while they were under calcium treatment, were those to whom parathyroid extract had been given. An association between reduced calcium content of the bone and bone metastases seemed to be definitely indicated; therefore, we have discontinued the use of parathyroid extract in the treatment of cancer patients.

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STOMACH—COMPARATIVE ANALYSIS OF GASTRIC CASES OBSERVED FOR PERIOD APRIL 1925-APRIL 1932

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By way of explanation it is perhaps best to mention that the reason for choosing the above period for comparison is because April, 1925, is the opening date of the Research and Educational Hospital of the University of Illinois. Several reasons prompted this comparison: first, it seemed interesting to know approximately just how our institution compares with other institutions as to the number of cases observed; secondly, we wanted to compare the incidence ratio between male and female patients, and lastly, we were attempting to establish an explanation for the apparently misleading statistical data to which the average medical student is exposed. For this purpose we chose to study the records and histories of three well recognized institutions: The Mayo Clinic, The Grant Hospital of Chicago, and the Research and Educational Hospital of the University of Illinois.

It is perhaps advisable to state that while Grant Hospital in its makeup is different from the Mayo Clinic and the Research Hospital it is to advantage to include that institution in the comparison inasmuch as it serves to bring forth certain information not made evident in the data of the other two institutions.

This report is based on a review of two hundred and fifteen (215) cases of the Grant Hospital and twelve hundred and eighteen (1218) cases at the Research Hospital. Through the courtesy of the gastro-intestinal section of the Mayo Clinic we obtained classified data of 17,799 gastric cases.

TABLE 1

COMPARATIVE SUMMARY OF GASTRIC CASES FOR PERIOD APRIL 1925—APRIL 1932 SHOWING INCIDENCE RATIO AND CONFIRMED RATIO

	Gastric Carcinoma			Duodenal Ulcer			Gastric Ulcer		
	Research Hospital U. of I.	Mayo Clinic	Grant Hospital	Research Hospital U. of I.	Mayo Clinic	Grant Hospital	Research Hospital U. of I.	Mayo Clinic	Grant Hospital
Male	169	1,377	39	830	10,500	127	77	1,875	18
Female	27	422	21	86	3,500	4	29	625	6
Ratio of Incidence	6/1	3/1	2/1	10/1	3/1	32/1	3/1	3/1	3/1
Confirmed Ratio	5/1	3/1	2/1	11/1	3/1	16/1	3/1	3/1	6/1

All cases were grouped as gastric carcinoma, duodenal ulcer and gastric ulcer and again subdivided into male and female groups.

In Table 1 you will note that we classify the averages into "Ratio of Incidence and Confirmed Ratio." In calculating "Ratio of Incidence" we include all cases that are diagnosed clinically, while in calculating "Confirmed Ratio" we include cases in which clinical diagnosis was confirmed by either surgery or autopsy or by both. Classification as just outlined was not possible in the cases of the Mayo Clinic inasmuch as we were unable to obtain such information at this time.

In Table 2 we classify the individual groups of gastric cases of the Research Hospital in detail as to average age, duration and so forth. One very often wonders if an extensive and laborious effort of this kind ever balances the amount of information obtained from such studies or from studies of similiar nature that have been published or will be published in the future undoubtedly as individual reports.

As a general proposition one must be ex-

TABLE 2

CLINICAL SUMMARY (DETAIL) OF CASES OF DUODENAL ULCER, GASTRIC ULCER, AND GASTRIC CARCINOMA OBSERVED AT THE RESEARCH HOSPITAL FROM APRIL 1925 TO APRIL 1932

	No. of Cases	Average Age	Average Duration	Average Wt. Loss	No. of Cases Operated	No. of Cases not Operated	Average H.B. %	Average Erythrocyte Count
DUODENAL ULCER								
Male	830	37	3 yrs.	22 lbs.	54	776	70	4,100 thousand
Female	86	39	1 yr.	25 lbs.	5	81	50	3,500 thousand
GASTRIC ULCER								
Male	77	40	8 mo.	20 lbs.	8	69	60	3,800 thousand
Female	29	43	4 mo.	31 lbs.	3	26	55	3,400 thousand
GASTRIC CARCINOMA								
Male	169	57	2¼ yrs.	27 lbs.	22	147	50	3 million
Female	27	57	2 yrs.	25 lbs.	5	22	60	3,200 thousand

tremely cautious in the interpretation of statistical data of any nature. It is particularly true when one is attempting to interpret statistics originating from a private hospital and comparing parallel statistics that come from an institutional clinic or a teaching hospital. What I mean is simply this—a case in a private hospital may receive considerable personal attention yet have little or no "work up" to confirm the clinical diagnosis; this while obvious for many reasons will alter matters considerably by comparison. Averages of positive gastric lesions in private hospitals are to my understanding, therefore, considerably higher than those of institutional or teaching hospitals. This is also obvious when one recalls the comparatively small percentage of autopsies obtained in private hospitals.

Again some clinics are so situated, I mean by reason of their geographical location or particular nature of their work, that their patients come to them for care after an illness of prolonged duration and therefore a surgical confirmation or an autopsy is frequently the bulk of their statistical evidence (confirmed ratio).

Another point of vital importance in this connection is proper evaluation of statistical data with reference of male to female ratio.

In Table 1 the ratio of male to female duodenal ulcer was eleven to one at the Research Hospital, three to one at the Mayo clinic and sixteen to one at the Grant Hospital.

In making a comparative study of ratios in various text-books it is particularly noticeable that the trend of opinion since 1920 has changed considerably. When I was in school we were taught that the ratio of male to female (duodenal ulcer) was two to one or three to one. All standard text-books favored that ratio. When the new edition of text-books was published the ratio was changed to four to one. During my interne year, my fellow internes and I often discussed the fact that while all standard text-books claimed a ratio of three to one or four to one for duodenal ulcers, we actually have not been able to confirm that ratio either in the hospital or the outpatient service. Ever since then I have had the feeling that the ratios were incorrect and began to teach to the students the probability of a higher ratio being more accurate. About five years later a new edition of Stevens' Practice of Medicine was published in which the ratio was given as six to one. It is true, however, that considerable literature on the subject has been published, giving a lower ratio. Taking those publications and text-book reports for their face value it is far from being clear to the average reader as to the reason for these variations, inasmuch as very often no definite explanation is given as to whether or not those ratios originated in a medical or surgical clinic or whether or not those ratios were ratios of incidence or confirmed by surgical exploration or autopsy. Up to the present time I am still not convinced that duodenal ulcer in the female is as frequent as one is lead to believe. One other observation must be considered; duodenal ulcers very often discovered at autopsy in cases that have not been operated on are in reality not clinical ulcers inasmuch as these patients never presented symptoms of ulcer nor any other gastro-intestinal complaint; therefore, if such information is included the ratio will of necessity be exaggerated. Attention should be given in this direction. To substantiate what I have said I wish to quote the following:

In Osler's Modern Medicine (McCrae) 1926, Martin states that statistics in regard to gastric ulcer are on the whole of very doubtful value; statistics on sex vary greatly and one should not attach too much importance to individual reports. As to geographical distribution Rutimeyer states that it does not seem possible to obtain useful statistics on regional distribution. (P. 508)

Crohn (1927) in his book on "Affections of the stomach" states that "Sex is an important factor in studying the comparative incidence of ulcers, for gastric ulcer occurs not often in women, while duodenal ulcer is found almost always in men, being rare in women."

Rehfuss (1927) in "Diseases of the Stomach" (P. 655)—states that duodenal ulcer is present in four or five to one ratio (male to female).

It seems that the information at hand at the present time on ratios is so variable and indefinite that it is almost advisable not to publish individual statistical reports in standard text-books.

In order to stimulate a little interest in this matter among the senior students in my clinic I often stated that I would gladly pay a dollar

for every duodenal ulcer in a female patient that any student would find. I really felt that a statement of that type would be interpreted by the students as a challenge and would naturally bring results. At the end of several years not more than three apparent cases were discovered, two of which had gall bladder disease and a third had a large ovarian cyst.

The real detriment that is being done is that it teaches the student to diagnose duodenal ulcer in a female patient when he should be considering gall-bladder disease first. One sees this mistake in private practice almost daily. I am hoping that some day some sort of a statistical bureau will be established within the American Medical Association where all material for publication, as articles of this nature, could be carefully checked and examined before releasing it to the publisher, for any text-book.

I am sure that considerable can be accomplished for mutual benefit, if individual reports of a statistical nature were properly compiled and classified; a centralized unified report would be kept up to date to be recognized as official for various geographical districts in the states and would obviate all misunderstandings as they arise at present.

CONCLUSION:

1. I believe that the male to female ratio in duodenal ulcer is considerably higher than is generally acknowledged at the present time.

2. The ratio is probably about twenty to one or thirty to one (male to female) confirmed ratio.

3. Careful consideration of all medical statistical data by a centralized body before publication would be invaluable.

4. The statistics obtained in this report point to a higher male to female ratio.

I am thankful to Dr. George B. Eusterman of the Mayo Clinic for permission in the use of statistics on this subject from his department. I also wish to thank Miss Mabel C. Root of the Mayo Clinic, Miss Lydia Conrad of the Research Hospital and Miss Laura Tegge of the Grant Hospital for their cooperation.

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HELPING WIFE

At a lecture for men, the speaker stated that the average wife needed her husband's aid in the home.

"I always help my wife," he said. "When she mops up the floor, I mop up the floor with her."

And he wondered why the audience laughed.

REPORT OF A CASE OF CHRONIC PANCREATITIS WITH PANCREATIC CALCULI

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The case history, which I wish to present, discloses many interesting features for us in that the patient suffered from a number of diseases notably, pancreatitis and pancreatic calculi and ran a chronic course to a gradual termination in death.

According to statements made by the patient which were somewhat inaccurate, she had been suffering from incontinence, glycosuria and polyuria; these complaints were later substantiated by findings in the hospital. She also gave a history of morphine addiction for three years previous to admission, for which reason she was committed and was diagnosed "Without Psychosis."

The physical examination on admission revealed a poorly developed and emaciated negro female, fifty-four years of age. The pupils were regular and equal, reacted sluggishly to light but readily to accommodation. Heart findings were essentially negative. Blood-pressure was 114/82. The lung findings were those of a far advanced pulmonary tuberculosis involving apices.

Laboratory examination revealed four plus Wassermann and Kahn reactions on blood serum, and the urine repeatedly showed positive tests for sugar and albumin; no acetone was present.

Insulin was administered but seemed to be of little avail in combating the glycosuria. Diabetic diet was instituted but the patient refused to cooperate. At this time she was diagnosed diabetes mellitus, pulmonary tuberculosis (far-advanced), chronic nephritis and syphilis. The patient expired four months after her admission, the cause of death being diabetes mellitus.

A post-mortem examination was performed a few days later. The body was then in an extreme state of emaciation. The thyroid gland was normal except for some cystic degeneration

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of the isthmic lobe. Both lungs were noted to be bound down to the pleura by firm fibrous adhesions. The middle lobe of the right lung contained a large cavity lined with a granular membrane. The cavity involved almost the entire lobe and extended into the apex by a sinus tract measuring one-half cm. in diameter and perforating through to the pleural space of the apex; the perforation measuring one and one-half to two and one-half cm. Pus was contained in a pleural space of the right lung. Patchy consolidation was noticed throughout the lower lobe, circumscribed about the bronchioles. The left lung was of a similar appearance, containing numerous sinus tracts connecting the lower and upper lobes, multiple small cavities being present throughout; the bronchi contained a purulent exudate. Calcified nodules were common throughout both lungs. The tracheal and peri-bronchial lymph nodes were caseous throughout. The heart was small and tubular in type. The coronary arteries were everywhere sclerosed, with atrophy of the myocardium. The liver weighed 1550 grams and occupied one-fourth of the entire abdomen; the parenchyma was of a dark red color and presented evidence of fibrosis in the inter-lobular spaces. Each kidney weighed approximately 260 grams, presenting evidence of a chronic interstitial change; they were granular appearing and presented contracted fibrotic areas throughout the cortex and firmly adherent capsules. The gastro-intestinal tract showed evidence of a chronic disturbance of the peritoneum with a chronic inflammatory change in the mucosa of the intestines; the lumen being filled with feces.

On endeavoring to isolate the common bile duct and the pancreas, great difficulty was encountered and this case report is founded on what was then discovered. Palpation revealed the presence of several firm masses in the region of the pancreatic duct. The greater omentum was everywhere firmly adherent to the transverse mesocolon and duodenum with obliteration of the lesser peritoneal sac, and the foramen of the lesser sac could not be found. Everything was so firmly adherent that it was almost impossible to isolate the pancreatic duct, but after a careful dissection of this region it was found that the pancreatic tissue was practically absent and that Wirsung's duct was all that remained, with some scattering of the parenchyma, still adhering to the wall of the duct. The lumen of the duct was markedly dilated and thickened throughout its entire course and somewhat tortuous, but narrowed down considerably where it entered the common duct. After opening the duct, within the lumen were found four coral-like, spiculated, marble-hard rotund stones measuring two to three cm. in diameter and completely occluding the ostium of the duct. There was a marked thickening of the mucosa measuring up to one-half cm. in places, and there was rugation. No parenchyma could be successfully isolated. The gall bladder was firmly adherent to its surrounding structures and densely bound down, but was free from stones.

The anatomical diagnosis was:

1. Chronic Pancreatitis with Calculi.
2. Bilateral Pulmonary Tuberculosis with Cavitation and Ulceration.
3. Pyothorax.
4. Syphilitic Hepatitis.
5. Chronic Interstitial Nephritis.
6. Chronic Inflammatory Peritonitis.
7. Chronic Gastro-enteritis.

The summary is as follows: It is interesting to note that this patient presented an unusual number of complications. That the pancreatic stones were probably only a part of the picture is true, but the fact that they were there is a rarity. The persistent uncontrollable glycosuria that this patient presented was undoubtedly due to a decrease of the pancreatic islets with consequent hormone loss. This might be termed traumatic diabetes or glycosuria, for the pressure of the enlarging calculi plus the presence of a chronic peritoneal change with unexpandable adhesions were the factors concerned in the production of pressure necrosis. The calculi were probably formed as the result of stasis due to paralysis of the autonomic nervous system during the course of first an acute peritoneal inflammation, and then a chronic change. Since these calculi are mostly composed of pure calcium carbonate and epithelial cells for the nucleus, there must have been a deposition of the calcium salts within the duct, normally present in the pancreatic secretion, acting as a synergistic activator; also calcium is ever present in visceral inflammation.

Pancreatic calculi occur infrequently, prob-

ably once in a thousand cases of pancreatitis, itself a rare disease.

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PYURIA IN CHILDHOOD*

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The presence of pus in the urine usually means infection somewhere in the urinary tract. The infection may involve all the urinary organs or only the kidneys, the kidney pelves, the ureters or the bladder. It is usually impossible to localize the infection in any one organ of the urinary system by the clinical symptoms or the physical findings which may be present. For this reason it seems better to call a urinary tract infection with pus in the urine a pyuria rather than a cystitis, pyelitis, etc., except in those instances in which a specific diagnosis has been made after urologic investigation. In accordance with this, the term pyuria will be used in this paper instead of pyelitis, etc.

It is important to know how much pus must be present in the urine to constitute a pyuria. To estimate the number of pus cells in a specimen of urine does not require any elaborate or difficult laboratory procedure. The urine should not be centrifuged. A drop of urine is placed on an ordinary clean glass slide, placed under the microscope and the number of white cells counted or estimated per low power field. A normal urine will usually contain several pus cells. A few more cells may be normally present in the urine of girls than of boys. No hard and fast rule can be made as to the number of cells which must be present to establish the presence of a pyuria. In general it can be said that when fifteen or more white cells are found per low power field in an uncentrifuged fresh specimen, a pyuria is present. However, when only the low limit of around fifteen cells is present, it is advisable to examine another specimen and to take into consideration the symptoms before making a diagnosis of pyuria. It is also necessary, when a small number of cells are present, to know whether they come from a vaginal discharge rather than from the urinary tract. It is not necessary to have clumping of the cells although this is frequently present. A diagnosis should never be made by gross examination of the specimen of the urine. Cloudiness and sediment may be due to phosphates, urates or oxalates as well as to large amounts of pus, especially when the urine has been allowed to stand for a few hours or to become very cold or decomposed.

The collection of urine for examination should not be difficult. Infants and young children urinate frequently, and by watchful waiting the mother or nurse can usually obtain a specimen. It is advisable to cleanse the genitalia before obtaining the urine. If necessary, a test tube can be taped over the penis or vulva or in girls a special small glass urinal cup can be used. Catheterization of the bladder is rarely indicated. It has its greatest usefulness in obtaining urine for the identification of the infecting organism, in determining when a sterile urine has been obtained in chronic pyuria and as a diagnostic procedure in the differentiation of supra-pubic tumors. In the usual case of acute pyuria, catheterization is not indicated. These children urinate frequently enough to obtain specimens easily, the type of infecting organism does not influence the medical treatment and the urine usually becomes sterile when the pus has disappeared. The above, of course, applies only to the usual case of acute pyuria and not to cases of chronic or recurrent pyuria. Catheterization should

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always be carried out with the most aseptic precautions. If, for any reason, urinary stasis due to obstruction is suspected, catheterization should be undertaken with hesitancy because infection, if not already present, will almost invariably follow even though the most aseptic precautions have been taken. The element of trauma must also not be overlooked.

Acute and Chronic Pyuria.—Cases of pyuria can be roughly divided into two groups, depending upon whether they are acute or chronic infections. The acute ones make up by far the majority of all cases of pyuria. The usual acute case lasts for a period of two to three weeks and will get well with or without medical treatment. In the chronic cases, the picture is a very different one. In these the infection may be associated with some other anatomic lesion such as obstruction wtih urinary stasis or urinary calculi, etc.; or such chronic infections as tuberculosis may be present. There are also certain cases of pyelitis or cystitis, as proved by urologic examination, due to chronic pyogenic infections, which are not affected by medical treatment or in which such treatment has been inadequately carried out.

Some infants and children have a recurring pyuria. The recurrence in some cases is due to a true re-infection of the urinary tract. In other cases, there is only a relapse of the clinical symptoms while the urinary infection persists between attacks. This return of the symptoms may be due to the fact that a cure was based upon the disappearance of the fever and the dysuria, and not upon the absence of pus cells in the urine. In some cases, the pus cells disappear from the urine during treatment, but a bacilluria persists which again causes a pyuria after treatment has been discontinued. For these reasons, Helmholz always requires negative urine cultures before pronouncing a cure. Unless the urine is examined until it is found normal, it is difficult to tell whether a recurrence of symptoms is really due to re-infection or due to a flare-up during the course of a chronic pyuria.

Age and Sex.—Urinary tract infection with pyuria is mainly a disease of infancy and early childhood. Its frequency is second only to that of upper-respiratory tract infections and gastro-intestinal tract infections. It is not common during the first few months of life but its frequency rapidly increases up into the first half of the second year. After this age, the incidence decreases fairly rapidly so that during later childhood it is again only fairly common.

Sex plays a definite role during infancy when pyuria is most often encountered. In the newly-born infant pyuria is found as often if not slightly more often in boys than in girls. From then on, into the first quarter of the second year, from 70 to 90% of the cases occur in girls. After this period it is found about equally often in boys and girls. The influence of sex applies only to the usual case of acute pyuria. The cases in which a severe pyonephritis or urinary stasis with obstruction is present are as frequently seen in boys as in girls, no matter what the age of the patient may be.

Mode of Infection.—The mode of infection is the same in both the acute and the chronic pyuria. Urinary stasis may have some influence on the ease with which infection takes place, but its greatest influence is upon the chronicity of the infection and the resistance to medical treatment.

The experimental work of Helmholz[1] and others has definitely proven that pyogenic organisms are not normally present in the urinary tract. The infecting organism then must gain entrance from some source outside of the urinary tract. The three possible routes of infection are 1. the ascending by way of the urethra into the bladder, 2. the hematogenous, and 3. the route through the lymphatics. There are many theories in support of each of these routes by which infection may take place, but it must be clearly understood that the mode of infection producing the pyuria in individual cases is usually not known, nor has the primary site of the infection been definitely established.

In favor of the ascending route of infection is 1. the frequency with which pyuria occurs in girls during the diaper age, 2. the frequency of pyuria when diarrheas are present and 3. the frequency of the colon bacillus as the infecting organism. In baby girls the urethra is short and of relatively large calibre and the exposed genitalia are in frequent contact with fecal material during the diaper age. It is during this period that pyuria is most commonly present with a 70 to 90% incidence in girls. During the course of a gonococcus vaginitis ascending infection may take place, but this

seems to be rare. It may also occur after trauma to any of the urinary organs or as a result of infection from foreign bodies in the urethra or in the bladder. Ascending infection also may occur following catheterization of the bladder. This is invariably the case if urinary stasis is present.

There are many theories favoring the hematogenous route of infection. It is believed that organisms can pass through the kidneys without setting up an infection there. In support of this can be cited the finding of the typhoid bacillus, the colon bacillus and rarely the tubercle bacillus in urines that are otherwise negative. Cabot and Crabtree[2] have been able to demonstrate positive blood cultures preceding urinary infection with the colon bacillus. Kowitz[3] found the colon bacillus in the urine and in the blood in several cases of infectious diarrhea. It has further been shown that colon bacilli are absorbed from the gastrointestinal tract, carried into the blood stream, and are either destroyed there or excreted through the kidneys.

In general septicemia we know the organisms are carried through the blood stream. The pyuria when present is due to a generalized or to a focal pyonephritis. While it would seem plausible to assume that kidney abscesses are always accompanied by a pyuria, such is not the case. The abscesses may become walled off or they may be so located that they do not break through the renal tubules, with the result that no pus cells will be secreted with the urine.

Pyuria is of frequent occurrence during the course of or following after the upper respiratory tract diseases. This is especially true when throat infections, otitis media, cervical adenitis and sinusitis are present. It may also occur with pneumonia, the contagious diseases (principally measles, chickenpox and scarlet fever) cellulitis, osteomyelitis and the pyogenic skin infections such as impetigo. Tuberculosis of the kidney is never considered a primary infection but secondary to some other focus. It is believed that any form of infection, whether acute or chronic, may become an etiologic factor in urinary tract infections. When pyuria does occur during the course of any of the above diseases, a septicemia is rarely evident but the hematogenous route of infection would seem to be the easiest explanation of its occurrence.

Urinary tract calculi, which are found fairly frequently during childhood are practically always accompanied by a pyuria and a hematuria. The trauma to the tissues and the urinary stasis which may be caused by the calculus offers a favorable medium for infection by both the hematogenous and the ascending route. Kidney tumors are frequently accompanied by a hematuria, but peculiarly, infection and pyuria rarely are present. A pyuria is rarely found with a perinephritic abscess although the infection is probably hematogenous in origin and the inflammation not only surrounds the kidney but may even extend through the renal capsule.

The theory of the lymphatic route of infection is based upon the existence of anastomosis between the lymphatics of the bowel and of the kidney. Proof of this route of infection is still wanting but it is probable that in some cases of pyuria the infection has been carried through the lymphatics.

How little is known of the mode of infection and of the primary seat of the infection is born out by those cases of pyuria which seem to develop as primary infections of the urinary tract. These apparently primary infections are the ones most commonly seen in baby girls during the diaper age when pyuria most frequently occurs. They occur in otherwise healthy children and as far as we know they are not secondary to or complications of infection elsewhere in the body. In contrast there are those older children with marked hydronephrosis and urinary stasis, who have passed through infancy and who have experienced the usual upper respiratory tract infections and contagious diseases without developing a pyuria. All the factors are present which we believe should influence a urinary tract infection and yet a pyuria does not occur. Whether or not functional urinary stasis occurs or is a factor in the development of an acute pyuria is not known.

Infecting Organisms.—The organism found in about 70% of the cases of pyuria is some member of the colon group. Other common bacteria which may be present are the staphylococcus, streptococcus, bacillus pyocyaneus, bacillus proteus, and more rarely, the tubercle bacillus and the gonococcus.

Symptoms.—The symptomatology accompanying a pyuria varies not only with the age

of the patient but also in acute and chronic cases. In infants the symptoms are general in nature. There is usually an acute onset with high fever and at times a convulsion. The temperature often reaches 105, does not usually remain constant but fluctuates over a wide range, gradually subsiding as the amount of pus in the urine decreases. Occasionally no febrile reaction is present. A chill may accompany the high fever and when present is nearly pathognomonic of a pyuria as it occurs so rarely in other childhood diseases. Pallor, restlessness, irritability and crying—the latter especially upon urination—are of frequent occurrence. The above general symptoms may be those of any acute infection. Because of this a urinanalysis is imperative in any unexplained fever. In the older child local symptoms are also usually present. They consist of dysuria, urgency, frequency and often tenderness over the bladder or kidney regions. When cystitis is present the local symptoms are usually more severe than when only the upper urinary tract is the seat of the infection.

In cases of chronic pyuria the fever, dysuria, etc., may be present only at irregular intervals simulating a recurrent acute pyuria. There may be long periods when only a low grade fever is present and even this may be absent. The physical examination may lead one to suspect the presence of some obstructive lesion in the urinary tract. A suprapubic tumor which disappears upon bladder catheterization, which is associated with dribbling and incontinence, should make one suspicious of a bladder neck obstruction or of a cord bladder. A tumor in one or both kidney regions might indicate a polycystic kidney, a hydronephrotic kidney or a kidney tumor. Palpable enlarged tender kidneys may signify the presence of a pyonephritis. A sausage-shaped tumor mass crossing the midline in the region of the umbilicus may be due to horse-shoe shaped kidneys with fusion at the lower poles. Hydronephritic ureters are seldom palpable. When an anomalous ureter empties outside of the vesical sphincter there is constant wetting of the diaper or of the clothes.

Pathology.—The pathology in cases of pyuria varies both in the degree and in the site of the inflammatory reaction. Very little is known of the pathology of the simple acute type of pyuria, the so-called primary urinary infection, because these patients rarely die from such an illness. In patients who have died from some other cause the whole urinary tract may be negative or at most there may be a few hyperemic areas in the lining of the pelves, ureters or bladder. In other cases there may be a definite inflammatory reaction, either mild or severe, involving the walls of the pelves, ureters or bladder. Even a definite inflammatory hyperplasia of the tissues may be present. If obstruction is present, the inflammatory reaction is usually more marked than when stasis is not present and there is muscle hypertrophy as well as dilatation above the site of obstruction. Wilson and Schloss[4] stated that there is always infection of the kidneys when a pyuria is present. We have not found this to be true as in some cases that we have been able to examine postmortem the kidneys showed no evidence of infection. When the kidneys did show infection it seemed to be of two types. In the definite blood stream infections there was a generalized pyonephritis or cortical and medullary abscesses. When the infection was an ascending one following catheterization, for instance, the inflammation was most marked in the medullary portion of the kidney adjacent to the pelves and calyces. The cortical portions of the kidney were normal. In cases in which the obstructive lesion was unilateral only the kidney on the same side became infected.

DISCUSSION

The majority of patients with pyuria are brought to the physician because they are ill, they have the symptoms of an infection. A smaller number seek medical aid because of local urinary symptoms or abdominal tumor masses. Examination of the urine becomes just as important as examination of the ears or of the throat. It is only by means of such an examination that the correct diagnosis can be made. If a pyuria is present and there is an absence of an abdominal tumor mass, medical treatment should be instituted and continued until the urine and temperature become normal. In the usual acute case this will be a matter of two to three weeks. If medical treatment has been adequate and the pyuria still persists, or becomes recurrent or the physical examination points toward an obstructive lesion such as hydronephrosis, bladder neck

obstruction, etc., then further examination by urologic investigation becomes necessary for the proper diagnosis.

Acute cases of pyuria should not be referred to the urologist or undergo urologic investigation until adequate medical treatment has been tried. These cases are a medical problem and should be so treated. This throws the responsibility upon the general practitioner and the pediatrician where it belongs. They must diagnose the pyuria, and they must recognize or suspect the presence of anatomic lesions causing urinary stasis. They must judge which cases should go to the urologist and when. Due to the advances in urologic methods and technique even infants a few day of age may now have a fairly complete urologic examination with comparatively little danger. Intravenous pylography should be a tremendous aid to the diagnosis of urinary tract pathology without instrumentation in these young children.

Urinary stasis undoubtedly increases the possibility of infection but when infection does take place it always causes a chronic pyuria. Stasis is dependant upon obstruction. The common sites of obstruction are 1. in the posterior urethra due to valves, 2. at the bladder neck due to bars, 3. in the uretero-vesical region, 4. at the uretero-pelvic junction, 5. at the point where anomalous renal vessels may cross the ureter and 6. at the distal end of anomalous ureters. Stasis also occurs with a cord bladder. The above abnormalities are all congenital anomalies and they are the most frequent cause of stasis in children. The acquired obstructive lesions are less common and are usually due to the pressure of retroperitoneal tumors either upon the ureters or the bladder. Acquired ureteral or urethral strictures are reported rarely. Urinary calculi are fairly frequent and may cause stasis. Phimosis has been reported as a cause of urinary stasis but upon more complete study of such cases it will undoubtedly be found that some obstruction in the posterior urethra or at the bladder neck has been overlooked.

That urinary tract abnormalities are of frequent occurrence is born out by the large number that are reported. In necropsy series the incidence has been reported as from 1.2 to 12 per cent. In a study of 99 urinary tract abnormalities occurring in infants and children it was found that about half of them were congenital obstructive lesions with urinary stasis. The lesions were first recognized at all ages from birth into later childhood, indicating that the infection may occur at any age although the obstruction is present from birth. Bladder neck obstructions and posterior urethral valves are invariably found in boys. This is not only true in our own experience but also of cases reported in the literature.

In closing I want to stress just four points:

1. The urine of every sick child should be examined.

2. The medical treatment of all cases of pyuria unless symptoms or physical findings of some obstructive lesion are present.

3. The complete urologic investigation becomes necessary in all cases of chronic or recurrent pyuria. These children should not be followed or treated medically for months or even years without the benefit of such an examination.

4. When a pyuria is present, the urine should be examined until it becomes negative. Check-up examinations at later dates should then be made.

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RUPTURES AND TEARS OF MUSCLES AND TENDONS OF LOWER EXTREMITY

Edgar Lorrington Gilcreest, San Francisco (*Journal A. M. A.*, Jan. 21, 1933), presents the case histories of fifteen persons with partial or complete ruptures (tears) of the muscles and tendons of the leg. He believes that these ruptures occur more often than is generally supposed. An early diagnosis should be made if possible. Joint symptoms, particularly in the knee, should not mislead one in the diagnosis. Early surgical repair in extensive or complete tears saves much time and gives a much better ultimate result. The prognosis usually is good if proper treatment is given early.

Explorer: "You shouldn't complain. When I was in the arctic I used to live on candles and blubber."

Friend: "Well, if I had to eat candles I guess I would too."

AMAUROTIC FAMILIAL IDIOCY*

Tay Sachs' Disease

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In 1881 Warren Tay[1] described symmetrical changes in the region of the yellow spot in each eye of a child.

In 1887 Bernard Sachs[2] described a form of blindness associated with idiocy with special reference to its cortical pathology (arrest of cerebral development). He later published a brilliant chapter recognizing the familial character of the disease and designated it as amaurotic familial idiocy.

Higier[21] was the first to propose the name of Tay Sachs' Disease. In later years particularly, Kingdom,[3] Russel, and Hirsch have laid stress upon the degenerative character of the disease. That the degeneration will set in wherever normal growth is arrested but life continues; that these children are born with limited and restricted capacity for normal development; that the gray cells may do as well as in any other child up to six months, but beyond that age the power for development ceases and degeneration sets in.

Recently Pelizaeus[4] described a condition called aplasia axialis extracorticalis congenita occurring in older children, from the third to fifth year resembling closely amaurotic familial idiocy. These children live longer and some may attain adult life.

Schaffer[5] was the first to describe the characteristics and pathognomonic ganglion cells in the entire nervous system. Optic atrophy and blindness occur, but no cherry red spots are observed.

Etiology: The disease is unquestionably of familial incidence. Sachs first regarded this disease as a congenital morbid process and later combined it with a degenerative abiotrophic change. (Lack of vital nutrition).

Gowers suggested the term abiotrophy which indicates arrest of normal development followed by degeneration. According to Gower, various parts of the nervous system have their own vitality, some of them may undergo a slow decay of the elements of the gray matter of the central nervous system while the life of all the rest continues without impairment. When the failure is early it is due only to a defect which seems to be inherent.

Sir Herbert Parson[6] disregarded the abiotrophic theories believing this condition to be the result of some inherent biochemical property of the protoplasm of the cell.

G. Marrinesco thought that gastro-intestinal toxemia resulting from disturbances of metabolism of calcium salts initiated by dysfunction of the parathyroid producing pathological changes in the intercellular ferments, might be responsible for the disease.

Kingdom,[3] Russel, and Hirsch have stated "The disease is a familial anomaly and we do not know the essential cause, even in the cases of the infantile form with definite clinical picture. There is an underlying cause, something more fundamental, that has not yet been described."

Many theories have been advanced, some are lacking in proof while others are still in doubt.

Clinical Features: Amaurotic familial idiocy may be classified as follows:—

1. Infantile form of amaurotic familial idiocy
2. Juvenile form of amaurotic familial idiocy
3. Late infantile form (studied by Bielchowsky[7])

This classification is based on the combined pathological and clinical aspects of the disease. The cases on which this study is based, namely the infantile type of amaurotic familial idiocy, all commenced before the sixth month of life. The number of cases is sufficiently large and the clinical data sufficiently complete to justify the presentation of symptomatology of the disease, as it manifests itself at this period of life. A comparative study of the clinical phenomena in these cases of infants, with the clinical picture in mind of the infantile and juvenile form shows a rather striking uniformity in the features of the symptom complex in infancy.

Such an infant usually is 5 to 6 months old, of Jewish parents. The onset is insidious; the child manifests little or no interest in his environment. He seems to show an increasing weakness of the extremities up to a complete paralysis with a gradual mental deterioration, and is unable to hold his head up or sit erect. All the muscles of the extremities are flaccid, never attempting any voluntary movements. Any object placed in his hands is quickly dropped; the child is abnormally sensitive to noise (hyperacusia).

*A report of two cases following fifteen years' observation of two normal children in between, and a review of the literature.

The child seemingly does not notice objects placed before his eyes, Nystagmus, strabismus have been observed in some cases.

Opthalmoscopic examination reveals the cherry red spot in the nacula lutea, accompanied by absolute blindness, and optic atrophy. Marasmus and fatal termination usually ensue before the age of two years.

Juvenile Form: The disease begins in youth instead of infancy without showing predilection for the Jewish race. These children are born healthy and develop normally to the age of 6 to 14 years, when they begin to show first, loss of intellectual faculties, slow and progressive loss of vision rendering the child blind, demented, and spastic. It occurs in both sexes and all races. However further study is essential to place the diagnosis in the same category as of the infantile and juvenile types.

Late Infantile Form: The late infantile form of the disease begins at 4 or 5 years of age with the same symptoms and findings as in the infantile type, except without the macular changes, and occurs in Jewish children.

Diagnosis: It is difficult to conceive how this condition can be mistaken for any other disease. The clinical picture is so characteristic that little doubt is present in the mind of the examiner, that he is dealing with this disease. The only condition presenting a symptom complex even remotely similar is Niemann Pick's disease which is a familial disease of the infant, with all the cardinal symptoms of Tay-Sachs' disease, the cherry spot at the maculae being similar in nature to that of amaurotic familial idiocy. The changes in the disc, however, differ in Niemann Pick's disease; they are yellowish, due to the deposits of lipoid substance in the nerve, while in Tay Sachs' disease they are usually atrophic.

Gaucher's Niemann Pick's and amaurotic familial idiocy all exhibit a disturbance in the lipoid metabolism. When the metabolic disturbances affect the entire body Gaucher or Neimann Pick's disease develops. The former might be the juvenile and the latter the infantile form of splenohepatomegaly or lipoid histiocytosis, while it is believed that the Tay Sachs' form is a disturbance of the same kind restricted to the nervous system.

Pick and Bielchowsky[7] have recently noted an association between Niemann Pick's and amaurotic familial idiocy. Rowland has recently correlated the pathological and clinical findings found in Neimann Pick's disease.

The literature on this subject is to a large extent confusing. Postmortem studies have been too much focussed on nerve tissue, while the chemical constitutional factors have been neglected.

Case 1. I. N. a boy, aged 5 months, was examined in 1916. The family history was negative. First child, of Jewish parents. There was no history of syphilis, alcoholism or tuberculosis in the family. Delivery was normal. The infant was breast fed. There was no trauma, no hemorrhagic diseases of the child after birth, no previous infections. The child weighed 7½ pounds at birth, was well-developed, good color; had a normal gain in weight until the 6th month, when the mother noticed that the child was more listless than other children of the same age, and that the child was drowsy. His eyes rolled curiously; the muscles of the back and neck were weak. He was unable to hold his head erect or sit upright; dropped objects placed in his hands, never attempted any voluntary movements. He was indifferent to his surroundings and did not notice his mother. The slightest noise excited the child.

Physical Examination:—Well nourished and well developed child weighing about 16 pounds. The child's motility was diminished, the tenden reflexes were slightly exaggerated. There was nystagmus, and deviation of the eyes. The pupils reacted sluggishly. The voluntary muscles showed the reaction of degeneration. Ophthalmic examination showed a cherry red spot surrounded by a white patch in the macula lutea.

Laboratory findings:—The Wassermann and tuberculin tests were negative. Urine was normal. The white cells 12,500, with 68% of polymorphonuclears. Red blood cells numbered, 4,750,000. Spinal fluid under increased pressure with negative reaction to globulin tests. The child was growing progressively weaker; emaciation, and blindness ensued, and finally he succumbed at the age of 11 months following bronchopneumonia.

Case 2. E. N. a girl aged 4½ months, examined September 5, 1922; full term, normal delivery, birth weight, 7 pounds 3 ounces. Normal gain in weight up to 6½ months when the child exhibited identical symptoms as the first, when it was noticed that she manifested little or no interest in her environment and was unable to hold her head erect or sit up. The muscles of her extremities were flaccid and there was an abnormal susceptibility to noise (hyperacusia). The vision appeared defective. Ophthalmoscopic examination revealed the characteristic cherry red spot in the region of the macula lutea.

Laboratory Findings: Urine negative. Wassermann and tuberculin tests were negative. Bleeding and clotting time were normal. Blood findings and differential count were normal.

Until November 2, vomiting occurred 2 to 3 times a week. Child lost a pound in weight. December 16, she began to refuse food and lost 12 ounces, developed

stomatitis and pallor of the mucus membrane. January 12, pallor increased, loss of weight continued, also occasional twitching of the legs and hands. She developed convulsions and turned blue, with profuse perspiration. Her eyes were sunken and she became emaciated. In March the child was growing progressively weaker, and developed a paralysis, mental deterioration and absolute blindness. Atrophy had been markedly progressive until death finally ensued about April, 1923.

Post mortem showed extreme emaciation. Subcutaneous fat had disappeared, fat muscles were atrophied, and showed very little rigor mortis. There was no fat in the mesentery or retroperitoneum. The brain tissue was atrophied. The dura was loose and collapsed giving an impression that it was previously distended with fluid. The meninges were edematous and distended. On removing the eye, the macula lutea showed a deep colored spot about 1½ cm. in diameter, surrounded by a gray ring 2 m.m. wide. No other pathological changes of importance were found.

In 1897 Koplik[8] reported two cases in different families. In the first family four normal children were born. The youngest child died of amaurotic familial idiocy. The second family the mother had eight children. Four died of this disease. The remaining four were all well.

In 1911, Dr. Abt[9] published his report of two cases in the same family. He believes that the disease has a familial tendency. As a rule several children in the same family are affected.

Van Starch,[10] in 1920, reported the case of a thirteen months old child, born of non-Jews, in a consanguineous marriage. There were five children born, three girls, two boys. All three of the girls developed amaurotic familial idiocy with fatal termination. The patient reported was the third child.

Frets and Overbosch[11] reported three cases in the same family, representing the second generation. Besides the amaurotic familial idiocy represented in the direct line of descent, other nervous disturbances were noted that manifested the hereditary tendencies involved. Symptoms of this disease developed in the three children, and proved fatal in all.

That there is a familial tendency Epstein[12] showed in a family of eight children, four of whom died of this disease.

In 12 cases reported by Gradel and Folk,[17] the familial trait was demonstrated in only three. In two families there was one other child affected, and in the third family two other children suffered from the same disease.

Cordes and Horner[13] reported two cases in Japanese families, the parents in each instance being first cousins. In case 1, the first child died at three years of age. This child was well until one year old, when amaurotic familial symptoms appeared. Pneumonia was a terminal complication.

In the second family there were three children. The first one was normal until six months and died suddenly. The second child had a similar fate. The third child died at the age of two years of convulsions.

No information was obtained as to the definite presence of amaurotic familial idiocy in the previous children, nor is there a record given of subsequent births.

In 1929 Stewart[15] reported twelve children in one family with amaurotic familial idiocy. Six of these children died in infancy of this disease. Of the remaining children the 1. oldest daughter is unmarried; 2. second daughter married, had one child, who died of this disease; 3. third daughter married, had one child, aged 2½ years, well; 4. one son married, had three children, two died supposedly of meningitis; 5. second son married, disinclined to have children on account of history of familial tendency.

The disease is regarded by Stewart as hereditary and Sjogren,[18] in a comprehensive study of the condition, found hereditary tendency and repeated occurrence of the same disease in families.

Davies[16] case is of a Gentile family, normal parents, with no history of physical or mental ailment. The first child is a boy, eight and one half years of age. He is backward at school, marked obesity, his condition gives the impression of pituitary infantilism. The second child is a boy of 5, normal. The third child, a daughter, was normal until five months, when symptoms of this disease became manifest. She died at two years. The fourth child, a boy, was normal until six months, when he lost power to hold up his head, became stupid and indifferent.

CONCLUSION.

1. Two cases of amaurotic family idiocy reported.

2. The first child, a boy, amaurotic family idiocy.

3. The second child, normal boy, now 16 years of age.

4. The third child, a girl, amaurotic family idiocy.

5. The fourth child, normal girl, now 9 years of age.

In view of the repeated occurrence of amaurotic familial idiocy in the same family it would be wise for the medical man to advise afflicted parents that subsequent children might be similarly affected and that every effort should be made to prevent conception.

1737 Howard St.

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USE OF FRESH HUMAN SERUM (COMPLEMENT) IN MENINGOCOCCUS MENINGITIS

In a case of meningococcus meningitis observed by Joseph J. Bunim and Frederick A. Wies, New Haven, Conn. *(Journal A. M. A.,* Jan. 21, 1933), antiserum therapy was followed by clinical improvement but did not sterilize the spinal fluid. After twenty-eight successive positive cultures, fresh normal human serum was administered intraspinally, followed by additional antiserum, with immediate sterilization of the cerebrospinal fluid.

MILK FROM RABID COWS — DANGER OF INFECTION

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Rabies is a perpetual problem in Illinois. The disease is always prevalent in the State and at times rises to epidemic proportions of large magnitude. Positive evidence of infection was found by laboratory examination in each of more than 1,000 animal heads (mostly of dogs) in 1928. Every year the laboratories of the State Department of Public Health examine for rabies more than 400 heads and positive evidence of rabies is found in from one-fourth to one-third of those tested.

When a definitely rabid dog bites a person there is no question about the type and method of treatment required. The possibility of indirect infection of humans, however, introduces a multitude of questions. One of these questions arises when people drink raw milk from a rabid cow. This situation developed recently in Southern Indiana near the Illinois border at Carmi when 19 people were found to have been drinking milk drawn from a cow that died of rabies. A state of alarm prevailed in the community when it was learned that several dogs had died from rabies and those who had drunk milk from the rabid cow experienced no little unrest. About a year ago the Illinois State Department of Public Health was called upon to furnish material for giving the Pasteur treatment to a group of people who had drunk unpasteurized milk from a rabid cow. A similar situation is liable to arise almost anywhere in the State at any time. Rabid dogs constantly attack cattle in Illinois.

Should a person who has drunk raw milk from a rabid cow be given the Pasteur antirabic treatment? In an effort to settle this question wisely the State Department of Public Health not only searched the literature on the subject but communicated with a number of physicians, veterinarians and medical research workers whose opinions on the subject are worthy of respect and consideration. On the basis of the literature found and the opinions expressed, the answer to the question is definitely, no. Theoretically it seems possible that a person who drinks raw milk from a

rabid cow may be infected with the disease in that way. Practically the danger is so remote that anti-rabic treatment incurs an unnecessary expense and inconvenience.

No human, so far as is known, ever contracted rabies by drinking milk from a rabid cow. That fact is very important evidence that the risk of infection through drinking milk from a rabid cow is nil. It seems reasonable to believe that many people at one time or another have unwittingly drunk milk from rabid cows. It is known that there is considerable loss of cattle in Illinois annually from rabies spread by rabid dogs.

Experimentally it has been observed that young animals feeding at the breast of rabid mothers escape infection.

The letter from the State Department of Public Health to a number of authorities on the subject read as follows:

"Can an individual contract rabies by drinking milk from a cow suffering from that disease?"

"Would you advise giving the anti-rabic treatment to such an individual if the animal has died with rabies?"

A reply was received from each. Pertinent excerpts from the replies are quoted below, the name of the author appearing first.

Milton J. Rosenau, M.D., Professor of Preventive Medicine, Harvard Medical School: "So far as I know, an individual cannot contract rabies by drinking milk coming from a cow suffering with that disease. I should not advise giving the anti-rabic treatment to such an individual even if the animal has died of rabies. The matter is mentioned in the section on Rabies in my book 'Preventive Medicine and Hygiene'."

William H. Park, M.D., Director of Laboratories, New York City Health Department: "I do not believe that it is possible for a person to contract rabies by drinking milk coming from a cow suffering from that disease. Therefore, I would not advise giving anti-rabic treatment."

Ludvig Hektoen, M.D., Professor of Pathology, Rush Medical College, University of Chicago: "In answer to your letter of the ninth, let me say that so far as known a person drinking milk from a cow suffering from rabies will not thereby contract that disease. The only reason for giving anti-rabic treatment to such a person would be to set at rest in the minds of the person himself and his friends all possible doubts that everything in the way of 'safety first' is not being done."

Robert Graham, Professor of Animal Pathology, University of Illinois, Urbana: "With reference to your inquiry regarding danger of milk from rabid cows will say that it is the prevailing opinion of pathologists that this is not a dangerous source of infection. The writers have observed rabid rabbits nurse their young without communicating the disease. On different occasions, we have been confronted with this problem and so far as we know no case of rabies in man in the United States has been traceable to milk. While the possibility is potential the practical danger is apparently not great."

National Institute of Health of the U. S. Public Health Service (Telegram): "No case rabies known from drinking milk. Treatment not advised."

H. D. Chamberlain, Veterinarian, Illinois State Department of Agriculture: "In compliance with your request of this morning as to the danger of drinking milk from cows which had been bitten by known rabid dog or a cow which was known to be rabid, I am of the opinion that there are very few if any cases on record where all other sources of infection have been eliminated in which a human has contracted rabies in this way.

"Perronceto & Carita—Nocard—think there exists a possibility of transmitting the disease by means of milk from diseased animals, but Nocard, in the course of two months, had a fox eat the cerebral and spinal tissue of six rabid foxes and twelve rabid dogs with no harmful results.

"Several experiments have been conducted by Delaford-Renault-Hertwig and Nocard by feeding saliva, meat and spinal cord of rabid dogs to horses, dogs and sheep without any ill results.

"I am of the opinion you are not justified in advising the use of rabies antitoxin in cases where the only exposure was through the use of milk from cows either bitten by known rabid dog or from a known rabid cow."

Mazyck P. Ravenel, M.D., Editor, American Journal of Public Health: "Theoretically, there is no doubt in my mind that an individual can contract rabies by drinking milk from a rabid animal. I have never heard of a case, nor has Dr. Ziegler, who succeeded me, ever heard of such a case. Both of us, however, believe in playing safe, and would recommend anti-rabid treatment, preferably one of the shorter series, like that of Harris, of St. Louis."

C. F. Adams, M.D., Director of Laboratory, Indiana State Board of Health: "I never have heard of a case of human rabies contracted from milk of a rabid animal. I do know, however, that several years ago the Minnesota workers succeeded in producing rabies experimentally from such milk.

"We always recommend the Pasteur treatment for people who have drunk milk from a cow during the few days preceding the animal's death. We do this under the theory that there might be a break in the mucous membrane somewhere between the lips and the stomach."

A London memory expert has sold his brain to a medical college for $10,000, to be paid in instalments. We can only hope for his sake that he is not the kind of chap who loses his head when he gets a little money.

—*Boston Herald.*

MEDICINE—WHAT OF THE FUTURE?

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INTRODUCTION

Dr. E. H. Cary of Dallas, Texas, in his President's address gave to the medical profession a most inspiring message of kindliness, vision, and pride.

His "high bridge," gives us a most beautiful perspective and strengthens our ideals.

He stated: "If we are to preserve individualism and the fine relation that has ever existed between physician and patient, we must with renewed zeal and exceptional energy seek an answer to the problems which are related to the economic side of the practice of medicine," also, "I hold that it is within our province to solve all the problems concerned in the practice of medicine. The people await our decision."

It is the privilege of few, to say so much in so few words and to say that much so beautifully.

In a discussion of "Medicine, what of the future," there is of necessity, two principal divisions of futurity, scientific and economic.

If the economic condition is met fearlessly and honestly, the future of scientific medicine is assured and I shall leave the discussion of this phase to others.

Economically, group practice, clinics, specialties, etc., are in the continuous process of readjustments.

As these readjustments are empirical readjustments, we must wait for time to prove the relative values.

But there are huge storm clouds assembling, nay, more than that, the storm is breaking upon us, the storm of laity control of the practice of medicine.

This storm is not waiting. We must act decisively—"State Medicine" or "socialized medicine" advocated are clamoring more loudly than ever.

Financial depression, with its unemployment, is sending out millions looking for something that can be bought with an empty purse.

In accordance with the idea of state medicine the Bulletin of A.M.A., October, 1932, describes several associations that, while in no way representing state medicine, nevertheless, are blazing the way for less and less individualism and more and more the paternalistic state.

Some of these associations are known as:

1. *Mutual Benovelent Hospital Association.* Established in 1851 in California, philanthropic in character and liberally endowed. The hospital staff is of highest grade, reputable physicians maintained for the membership only. Nominal cost $22.61 annually but offers free choice of physicians *only* in so far as the free choice happens to be one of the hospital staff. *The majority of the profession excluded.*

2. *Workmen's Compensation in Oregon.* The state fund carries about 90% of the compensation insurance. Most of these compensation laws with direct contract provisions provide that an employer may levy an assessment on his employees for medical service, averaging about 20c per day in Oregon.

(A) In Journal A.M.A., November 26, 1932, under the caption Medical Economics, Fred Ross, a labor attorney, is quoted as follows—"When the present commission assumed control, one of its first acts was to discharge the entire medical staff, which was composed of physicians particularly fitted by training and experience to serve the needs of the Industrial Accident Commission. They had served under all of the previous administrations, but, nevertheless, they were made to walk the plank to make room for those who were close politically and otherwise to the governor in fact."

Similar organizations in Alabama, Texas, West Virginia, California and New York.

3. *Hospital Associations.* "Hospital associations, in general, are medical contract associations, having few staff physicians on salary or work allotted to the physicians on piece work basis.

"This involves solicitation for medical work, underbidding and inadequate fees to physicians, frequent disregard to professional ethics, no free choice of physicians."

4. *County Contracts for Care of Indigent Sick.* This again delves into the element of politics, generally with lack of regard for competency of physician.

5. "In September, 1929, Dr. Walter B. Coffey of San Francisco outlined to the California Medical Association a plan for medical service to wage earners with incomes less than $2,500 per annum, those earning less than $1,200 a year paying at a rate of $1.00 per

month. Those earning $1,800.00 a year paying $2.50 a month. This plan necessitates all members of State Association becoming associate members in the State Society Plan."

6. *Los Angeles Record Health Service.* Open to subscribers of the Los Angeles Record. Service of two types.

First type requires an annual subscription to the paper and a registration fee of $1.00. "These fees are approximately one-half of the fees regularly paid by the suffering public."

Service No. 2. "A complete medical service at low cost of $1.35 paid monthly in advance to the Pacific Life Extension and Hospital Service System. This plan is commented upon in the Journal A.M.A., November 19, 1932 as follows:

CRITICISMS (A.M.A.)

"It is difficult to discover any merits in this scheme. Possibly the stereotyped claim made for all such schemes may be advanced; viz., that it offers a kind of medical service to some who might otherwise depend on charity.

"Its demerits are as many and as glaring as the flamboyant advertising of '200 designated leading physicians and surgeons,' which dwindles to 23 when the list appears. Just what medical authority picked these 'leaders,' the advertising fails to state.

"Adequate medical service cannot be delivered for $1.35 a month. If physicians crediting their loss to advertising received through publicity at first do give such a service, professional income, incentive and morale will decline until future progress and resulting service are threatened. Such proposals illustrate the inevitable deterioration that follows commercial competition between contract schemes.

"If such scheme for the distribution of medical services, is based on the same premise as many others in which an insurance principle and the interposition of marketing agencies are used, it is difficult to determine how either the medical profession or hospitals will be able to realize an adequate fee for the service rendered. In this particular instance the newspaper, the Pacific Life Extension and Hospital Service System, Inc., hospitals and physicians are to be provided an income at from 45 cents to $1.35 per month (plus $1.00 for registration fee) for an entire family.

"It should be obvious that the rates quoted are utterly inadequate to provide any medical service except the barest first aid for minor afflictions. To provide complete medical services at such rates would mean swift bankruptcy for any honest and conscientious individual or group. It is not known what is meant by the statement 'the reduced rate arranged for me by the Los Angeles Record.'

"Although the advertisements of this service lead the reader to believe that medical service is to be provided for all illnesses, nowhere is there a definite statement to that effect—the completeness of the medical service available and the charge for that service except the monthly stated payments, are merely implied.

"It seems reasonable to infer that in addition to the monthly rate the patient may be required to bear personally the 'reduced rates arranged . . . . . by the Los Angeles Record.' "

7. *Baylor University Hospital Insurance Plan.* A monthly fee of 75c, covering hospital, operating room, anesthetic, laboratory fee, floor nurse, ordinary medicine and dressings over a period of 21 days per year with a 50% discount on x-ray work, but does not include the physician's fees.

8. *Texas Medical Association Contract Organization (Proposed).* In this plan a body composed of the most honored and respected physicians in the state should apply for a charter as an association to primarily guarantee adequate medical service to corporations.

This plan is ambitious, in that the association is to be allowed to possess property, publish a monthly medical magazine, rent, build and to conduct a scientific industrial laboratory and to rent or build a hospital ward for scientific treatment.

It is intended that this association is to offer its service to insurance carriers and take over the entire medical problem.

9. *Bassett Hospital Annual Payment Plan.* This has a membership fee of $25.00 per year per individual and $100.00 per year for entire family. This plan sponsored by a group of physicians comprising the staff of Bassett Hospital. All these physicians are on a salary basis and their offices in the hospital, there being twelve other physicians in the community.

10. *Columbia Casualty Company Sickness Insurance.* By the Columbia Casualty Company, a representative of the Ocean Accident and Guarantee London Corporation, the premiums run from $3.00 to $10.00 per month.

The highest class of service is allowed and hospital care for 26 weeks with a private room at a rate not exceeding $15.00 per day, including nursing service, drugs and medicine. The Columbia specifically provides that the Company shall have no control over the character of the medical practice; however, it is planned that 45% of the premiums be set aside for the medical service, 12.5% for hospital service and 42.5% for promotion, organization, sales, administration and profits.

For further details for this plan, I refer you to the *Bulletin.*

11. *Medical Economics—Journal A.M.A.—New Forms of Medical Practice No. 4. The Bridge Clinic, Tacoma, Washington.* This is a description that aptly describes a great many of the organizations attempting to function at the expense of the individuals, as a class and the medical profession as a whole.

One paragraph is significant: "This latest and most significant development has been accomplished largely by the use of supplemental 'medical contracts' covering non-compensable diseases and injuries, into which the employees are compelled to enter as a condition of employment."

The Bridge clinic has offices in Seattle, Tacoma, Eatonville and 25 other points in Washington.

Harry E. Mock, "Industrial Medicine And Surgery," 1921, in his "Solution of the Problem" advocates "insurance against sickness, accidents, invalidity, unemployment and old age"—and says, "No longer shall inadequate medical and surgical care be tolerated or protected by the unwritten laws of the profession generally included under the term medical ethics."

Warbasse, in his "Surgical Treatment," volume 3, writes: "As one looks into the future, communities are seen divided into sanitary districts, each with a sanitary expert answerable for the public Health . . . . . Here should be laboratories for diagnosis equipped with every appliance and facility of science . . . . . in connection should be a central hospital."

In previous editions he spoke in a stronger language. "Abroad the socialism of medicine or state medicine is lauded by the privileged few and damned by the whole, less a few of its parts, and generally takes the form of insurance."

Chicago Tribune, November 30, 1932, carries the story, "Group medical care urged by survey report."

Sweeping changes in the field of American medicine which if put into effect, would result in the partial socialization of the medical treatment, were advocated today in the report of the committee on the cost of medical care.

The revolutionary document, which advocates extension of the hospital center idea, with the use of insurance and taxation to place costs on a group basis, has already stirred the beginning of a controversy which bids fair to rock the medical world.

From Chicago came word that the Journal, A.M.A., in its next issue of December 3rd, would impugn bias to the report and urge support of the minority findings which were signed by members of the A.M.A. on the committee who recommend the following:

1. Government competition in the practice of medicine be discontinued.

2. Coordination of medical services a function for local communities.

3. The general practitioner be restored to central place in medical practice.

4. That the corporate practice of medicine be opposed as unfair exploitation of the medical profession.

In a special article by Sir Arthur Newsholme, M.D., F.R.C.P., K.C.C., Birmingham, England, as reported in the Journal, A.M.A. of May 14, 1932, there is a rather extensive outline of the relationship of the private medical practitioner to preventive medicine. He prefaces his outline with several postulates, or, to be more exact, nine postulates. I shall spend no time in repeating these postulates; if you are interested you will find them in the volume mentioned.

The outstanding affect of this article, or I might say the reaction to the reading of this article, to my mind, is the marvelous complacency with which the proponents of socialistic medicine classify, direct, treat, etc., humanity.

I am impressed with the idea that perhaps sometime some thing or things may force the profession and the laity and would be leaders of the medical profession to consider humanity not as mass production but as individual man.

Perhaps the political term that was coined during the last election "The Forgotten Man" is very apropos in the treatment of the sea of human misery.

In this article, under the head of "Medical Aid for the Poor," he writes that every doctor may undertake this work according to a fixed schedule of fees.

Again, "In Ireland, in many, especially rural districts, half the population receive gratuitous medical service; and it may be said that Ireland approaches nearest of all countries

known to me to State medical service, the cost of which falls on general taxation." This, of course, includes periodic medical examinations.

When will the medical profession realize that while we stand ready to preserve, protect health we stand only in *readiness?* We are *not* actual guardians of public health; we function only *when called upon.* We have been given no supernatural powers by the heavenly Father or the civil state to automatically direct the activities of the citizens.

When will the American medical men and the American public as a whole, or I may go farther than that, the populae of the world realize that we can never legislate health in its entirety any more than we can legislate thrift.

Do we soon forget the parallel efforts along this line of the "noble experiment"—the 18th Amendment?

In the succeeding paragraph he writes, "In Scotland there is a special State Service for its highlands and islands, in which, otherwise, medical aid would be lacking. *The government guarantees the salaries of doctors in supplementation of fees paid by patients, and gives mileage allowance for travel.*"

"Is not such an action indicated in certain mountainous parts of the southern states in America, especially for midwifery and for that terrible disease trachoma?

"Not even the most rigid opponent of state intervention can doubt its necessity in areas where otherwise our three first postulates cannot be met."

It appears that Plato lives forever, especially in the mind of him who is snugly ensconced in the public treasury.

He continues: "This is a case of utmost need; but, short of this, nearly every private medical practitioner, especially in rural districts, day by day is himself a vicarious substitute for the state, and he gives medical aid gratuitously—as every member of the medical fraternity must—when need arises."

I take exception to this entire statement. I do not recognize the medical profession as a submissive hand-maiden of the state. I insist that, practically, State medicine is *State Politics,* and as such, is contaminated by and saturated with all the inefficiencies and injustices that go hand in hand with American politics.

I insist that the Association of Medicine is made up of individuals who are helpers of the Divine Physician and should in no way be lowered to the threshold of politics.

It may be as some claim that we have in our ranks those that are inefficient.

This I do not deny or affirm, but I point to the religious profession who have come throughout the ages, practically, from the same source as that of medicine; and remind you that religion in America is entirely separated from the state; that the religious foundations are built on theoretical grounds and beliefs and that medicine of the same degree of antiquity has replaced, wherever possible, scientific facts instead of theories, and stands on even firmer ground; that the soul is, even in 1932, debatable, but malaria is perceivable; that the many forms of prayer are believable, but the mosquito is viewable.

When the most noble essayist states, "Thus the private doctor, the tax gatherer, and the medical officials alike, are state servants," I would ask that he place himself among the thousands of the followers of the Master and forget his emoluments, revenues and gains by state benefactions and again occupy the place of the true physician.

In his discussion of the hospital provision for the poor he phrases, "For a weekly payment of perhaps three pence, employers contributing an equal amount, families are partially insured for consultative services and when necessary for treatment in hospital; in some towns, half the cost of maintenance of voluntary hospitals is now derived from these sources."

He goes on to say: "Evidently such a system lends itself to increasing abstractions from private medical practice and although the majority of these patients would be sent to a hospital by the medical practitioner treating them, there are others who should remain under his care. *This needs to be more strictly regulated.*"

I ask: By whom! The master gangster whose cohorts elect him to the presiding office? How much humanitarianism will be shown? How much liaison with the Divine Physician will he be accorded?

Perhaps some day the forgotten men will arise in their majesty and say to the state: "Keep your hands off my pastor and my doctor—or I will change the state."

In his discussion "Treatment to Anticipate Disease" I quote (p. 1743): "In every European country, public authorities and voluntary agencies are busy with this most important work; while private practitioners who might be in charge of it, singly and cooperatively, have little concern with it, under present medical practice, etc."

How does this accord with the American custom of electing the bricklayer to be judge, the musician to congress, the lawyer to the Highway Department and the man who can control the votes to any position he wants?

It takes years of patient study to be a doctor, it takes a political contribution to become the head of a maternity bureau, or a Health Department Superintendent. *More* reasons for State medicine.

The essayist treats at some length "Insurance treatment" and naturally confines his observation to the European Countries. Let us look for a moment, at the American situation.

The insurance problem in America contacts the medical profession in two distinct ways:

1. Workmen's Compensation.

The fundamental method at present is for the employer to pay to the Insurance Company a stipulated sum and in return the Insurance Company agrees to take care of any losses that may come to the employer under the Workmen's Compensation Act.

The main idea is of course that the Insurance Companies hope to collect more premiums than they pay out in compensation losses.

So many factors enter into these transactions, that it is impossible to detail them, unless years of time are given to the problem.

The most flagrant disrupter is politics. The political scheme of the compensation act in Illinois is basically: The Legislature enacts legislation describing who shall come under the act; what weekly payments shall be made, what payments shall be made for the Workman's specific losses (loss of thumb, foot, eye, leg, etc.); and sets up machinery for the enforcing of the act, consisting of the bureau itself, commissioners, arbitrators, and appellate divisions of circuit and appellate and supreme state courts.

The commissioners, arbitrators, clerks, etc., are political appointees.

The Insurance Companies keep their rates down to compete with each other, employ investigators, adjustors and doctors.

The investigators and adjustors to keep the losses to a minimum—the doctors to treat the injured, keep specific loss to a minimum and curtail the time lost from work, etc.

Unfortunately there is severe competition between the physicians themselves so that the Insurance Companies pay a very variable scale of fees for professional services and pay from zero to one hundred dollars a day or more for medico legal services.

Owing to the competitive struggle for business the insurance premiums are unsatisfactory in returns—most of the companies balance their books in the red and the insurance carrier strives in several ways to break even, viz.:

1. Refuse to accept compensation insurance unless the employer gives them enough insurance in other lines, bonds, plate glass, automobile, public liability, etc., so that the profits from insurance other than compensation, overcomes the losses of the compensation insurance.

2. Elimination of bad compensation risks, underground working, restaurants, quarry working, etc.

3. Insurance associations; mutual agreements on rates, etc.

4. Securing medical services at lowest possible cost.

The insurance carriers are thus engaged in no humanitarian enterprise. The enterprise is purely commercial.

The various forms of insurance issued to the individual have been enumerated in part, and again are purely business ventures with a hope of profit, a hope of paying out to the policyholder, the hospital, the doctor, less than the premium.

The insurance carrier states positively that as soon as the insurance companies withdraw from the field of compensation, state medicine will be in full force.

Newsholme continues: "Even with the handicap constituted by combining insurance for medical and for monetary benefits, the cause of preventive medicine can be satisfactorily served *IF WE secure almost superhuman competence in the management of the insurance scheme, and that scheme furthermore is adhered to by every injured person and every doctor with almost superhuman loyalty and integrity.*"

A large "if," lots of Plato, plenty of Utopia. Again Sir Newsholme: "The only practical alternative consists in vast extensions of state service without insurance."

With no desire to offend anyone, I take severe issue with this entire scheme.

Gentlemen of the profession: Why should the medical profession be the victims of this philanthropic bunk? As a general lot the medical professional are an altruistic group, and we would like to see any one, the insurance carrier included, make money—but why at our expense?

State medicine with its corruption, bureaus, commissions, its thousands of ramifications into the taxpayer's purse, its inefficiencies, is urged and planned.

Are all the Al Capones in Atlanta? What of the medical racketeers who devise multitudinous State medical schemes with salaries attached at the expense of the doctor?

Are you not satisfied the Veterans' Bureau federalized medicine?

How many thousands of service men (incidentally their wives, children, parents, grandparents, and sixteenth cousins) have been augustly summoned to the various hospitals; been under observation for months, years; had x-rays, Wassermanns and Kahn, blood chemistry, uroscopy, fluoroscopy, psychoanalysis, retinoscopy, turbinectomy, prostectomies, and then went back to your community with a pension.

You, in your benign ignorance as a general practitioner, have looked them over, gone into your drug room, prepared an ounce of that non-federalized castor oil, administered it to the patient and have seen him, the next week, hauling coal.

Adam got something for nothing and then had it taken away from him. What difference is there in the Adam of 1932?

Must we go on to see the quivering flesh on the operating table adapting itself to size No. 2 crane valve No. 1,736,978,426—skillfully manipulated by the state medicine legalized steam fitter, wearing on his operating gown union local card No. 23,764?

I suppose we will also see a certification by Secretary of State that the operator is empowered by law to open this valve not oftener than once in ten days.

What can we do to remedy this situation?

How can we establish a Monroe Doctrine for medicine?

How can we protect our patients from these cunning schemes with ulterior motives and protect ourselves against exploitation?

What can we do to prevent monopolized medicine and socialized medicine, or to modify state medicine so as to secure the greatest benefit to the population, justice to the medical profession, and eliminate, to as great an extent as possible, politics?

I offer the following suggestions for your consideration:

1. Let every one in our profession remember that we are treating humanity, that we are living in the midst of humanity; that we ourselves are merely human. Let us take time to get in touch with humanity and human affairs.

As much as we would desire to withdraw into our studies, our laboratories—let us be rigorous with our self discipline and sternly remember to properly enmesh our gears to humanity with its desires, aspirations, foibles and follies.

Let us discard forever the topper and swallow tail—but at the same instant remember that we are worthy of our hire—we own our place in the sun.

(We are voluntary servants to the many, but in bondage to none—the state included.)

2. Let us reason the proper procedure among ourselves—in local medical societies, in meetings like this, in state meetings, national meetings.

And while we are reasoning out these matters, let us be sure that it is the *Collective We* that is doing the reasoning and not the few.

Remember your value as a reasoning agent is not to be judged by your Ford, your Rolls Royce, your country practice, your staff position.

Jenner was a country doctor.

As a rule the more you know your patient's joys and sorrows, the more valuable your opinion is on matters pertaining to the medical profession.

3. Let us know who represents us in politics.

It is hard to get men of proper caliber to pay attention to politics but *it is easy to get the politician to pay attention to votes.*

If your patients *trust* you, they will so vote that the medical profession will be unhampered

in its progress, and this is the *Keynote* of preventive State medicine. Be right, trust in God, and shoot straight.

4. Let us face the facts regarding the general practitioner. (He is the very foundation of all medical progress and of humanity's welfare).

Those engaged in research can find the progression. Those engaged in teaching medicine can propound the progression, but the general practitioner applies the progression after it has been properly evaluated and held in solution of horse sense.

5. Too long has the general practitioner held the specialist in awe. The specialist is only a doctor like ourselves. He is but one of the many working tools of the general practitioner, even as the chisel and the saw and the miter are the tools of the carpenter.

Even as the carpenter reaches for the chisel in its place on the wall and uses that chisel to do that which the carpenter desires it to do and then replaces the chisel in its proper place, so should the general practitioner use the specialist for the desired results and then see that he is properly in place afterwards.

I mean by this that the general practitioner should constantly keep himself with such a mental equipment that he *knows* when the roentgenologist is necessary or the cardiologist is necessary or the laboratorian is necessary; and when he gets his reports, he must be equipped mentally so that he can interpret their reports.

This means constant study and an exacting life. This means that hours of desultory conversation and wasted time must be curtailed and that time spent in keeping abreast with medicine in general.

This means that the idea of sending a patient into the hospital and ordering, in mass, all of the laboratory procedure possible must cease.

This means that only the laboratory procedures that are necessary are undertaken.

The criticism that hospitals and medical services are so expensive is partially correct. It is up to the practitioner to eliminate all unnecessary procedure, and, again, this means that he must keep up to date.

The specialists that I have been privileged to know are of the highest type. I admire them; enjoy their work; enjoy their company, but I intend that the specialist be called in consultation only when I deem it necessary—when more detailed information along some line is necessary.

This naturally leads to the great bug-a-boo, splitting of fees.

At the very beginning, I want to take to task the members of the medical profession that have carried the profession's dirty linen into the public press for cleansing. I assert, without fear, that the doctor who has carried the subject of fee-splitting into the public press is deserving of the censure of every member of the medical profession.

This is a medical affair and should be handled within the confines of medicine.

I don't know how you medical men react to these men writing these articles in the public press, but to me, it is merely from the selfish, personal standpoint of advertising.

The whole question of splitting of fees can be handled and should be handled by the general practitioner. We need no society or college to promulgate rules for us. Common decency, common honesty to our patients, common respect for ourselves—in a word, ordinary horse sense, points to a solution of this problm.

There is no reason why the general practitioner, having in his clientele of patients, someone in need of an appendectomy, should not handle the entire problem.

If he qualifies as an up-to-date practitioner, his knowledge of the specialist needed to help this patient is sufficient.

There is no reason why he cannot say to the proper specialist—"My patient needs an appendectomy; my patient is in such and such circumstances—how much will you charge me, not the patient, to perform this operation?"

(We will say, for example, that the surgeon quotes a charge of $100.00)—

The general practitioner tells his patient who needs this operation—"It will cost you $100.00 besides my services for your operation. My services will be $125.00.

"Besides this will be your hospital bill which I estimate (the general practitioner should be able to estimate) as $75.00. Therefore, your expense will be about $300.00 all of which you will pay to me."

Then the general practitioner pays the hos-

pital in full, or in what pro rata the patient pays him, and likewise pays the surgeon.

The objection will be given that the general practitioner will secure the cheapest specialist possible. This is unworthy of an answer.

There is no reason, no justice, in turning a patient over to a specialist, losing entire contact with the patient during the time of his treatment under the specialist.

Today, too often, the specialist assumes the role of a hero in the patient's eyes, when in fact the real credit should be given the general practitioner.

He it is that diagnoses the condition; he it is that assumes the responsibility for the workmanship of the specialist; he it is who assumes the blame if the specialist fails.

Being forced to assume all responsibility, he should be in entire charge.

The specialist is, rightfully, the general practitioner's assistant.

Did a saw ever build a cabinet?

6. There is one other thing that the general practitioner and the assistant, the specialist, must do and do at once, and that is eliminate the jealousies.

Join your Association of Commerce and learn as the merchants have learned, that petty bickering among themselves spoils their advancement.

Remember that every doctor, whether he occupies a chair in a medical college, or whether he be at the head of a famous clinic, or whether he be a practitioner in a sparsely settled country, assays the same.

His knowledge and his experience properly evaluated is of equal weight.

Every doctor near you is human like yourself; is not the rascal that some of us would like to tell our patients about; is not the God that his friends declare—just plain man, trying to do his best.

No physician, other than the treating physician, is the judge of what should be done in a given case. There is only one real Physician and He has no office on earth. The rest of us are doing the best we can, so let's co-operate and cease denunciation.

If you must quarrel, keep your quarreling in the profession. Again I say that this is a medical family affair and no excuse to wash medical linens in public gaze.

7. When your delegate goes to the state meeting, be sure that he goes to the state meeting; be sure that he goes instructed as to what the actual majority of your society wishes.

Likewise—the delegates to the A.M.A.

We have wonderful men as officers—but they are selected and elected by delegates representing you.

For true progress there should be no human gods in medicine.

8. And finally—

Let's change our medical symbol.

Apparently, the proponents of State Medicine are myotic. They perceive the symbol of Aesculapius as the representative of the patient, ignorant and dumb ox.

Medical services are not on the auction block. We own our place in the sun.

700 Peoria Life Bldg.

"MORNING STAR" FECALITHS OF THE APPENDIX*

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Star shaped fecal concretions referred to by Tobler[1] as the "Morgenstern" fecaliths are rarely found in the vermiform appendix. Unlike the common round or ovoid fecaliths which are found according to Neumann[2] in about 29.7 per cent of all the appendices excised at operation, only scattered reports are encountered concerning these star shaped fecaliths. The first mention of them was by Rochaz[3] in 1899 who attributed their configuration to irregularities in the mucosa of the appendix. Later Faulkenstien[4] and Tobler in 1923 reported cases with similarly shaped concretions. We have found no other mention of these concretions.

The apparent rarity of this condition seems to warrant the report of a single case in which several star shaped fecaliths were found in the vermiform appendix.

REPORT OF CASE

J. C., a boy, aged 13 years, was referred to us by Dr. Charles Pugh, Sept. 15, 1930. For the past year the child complained of a dull intermittent lower abdominal pain which at times localized to the right lower quadrant. The pain was often associated with a diarrhea

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but with no vomiting. About 24 hours prior to his admission to the hospital the patient complained of a diffuse abdominal cramping pain which within 14 hours localized in the right lower quadrant. The child was nauseated but did not vomit. Following the onset the patient had two loose stools.

The past general history revealed that the patient had acute rheumatic fever when seven years of age and later developed a mitral stenosis. The remaining history contained nothing of importance.

Physical examination revealed a poorly nourished boy, 13 years of age, who appeared acutely ill. The temperature was 99.6° F., pulse rate 90, and respiratory rate 18. Abdominal examination revealed a tenderness and rigidity over the right lower quadrant but no mass was palpable. Elsewhere the abdomen was soft and not tender. The general physical examination revealed no pathological findings except those of a compensated mitral stenosis.

The white blood count was 23,500. The urine contained no albumin, no casts, no blood cells.

A diagnosis of acute appendicitis was made and immediate surgical intervention was advised. Under ether anesthesia the abdomen was opened through a McBurney incision. The appendix and cecum were easily delivered. The appendix was enormously enlarged, firm and its serosa was hyperemic. The base of the cecum especially around the origin of the appendix was thickened. The ileocecal lymph glands were enlarged up to 1.5 cm. in diameter; they were gray white, and firm. The presence of a thickened appendix and cecum associated with enlarged regional lymph glands and a history of abdominal symptoms over a prolonged period, suggested an operative diagnosis of a hyperplastic chronic appendicitis, probably tuberculous. With the possibility of an ileocecal tuberculosis in mind the last 10 cm. of the ileum, cecum, ascending colon and one-half of the transverse colon were resected and the continuity of the intestines was reestablished by an ileotransversostomy performed with a lateral anastomosis. The post operative course was uneventful. The patient was last seen 14 months following the operation. He was relieved of his chronic abdominal distress, gained weight and had grown about six inches.

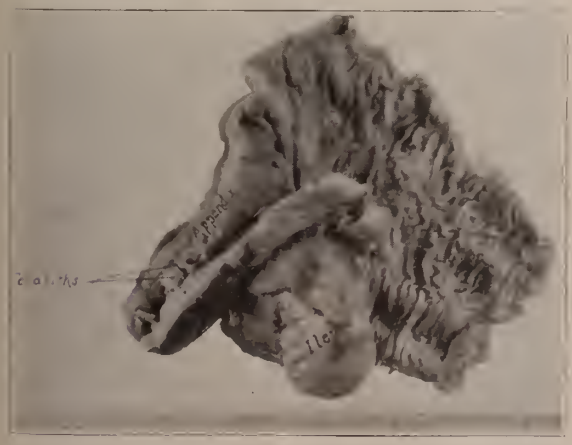


Fig. 1. Resected specimen showing the hyperplasia of the appendix and the three fecaliths in sacculations of the appendical lumen.

The examination of the resected specimen, Fig. 1, revealed the appendix to be 8 cm. long and from 2.5 to 3 cm. in diameter. The serosa was smooth and mildly hyperemic. The appendicular wall was firm and varied from 0.5 to 1.0 cm. in thickness. The mucosa was thickened and in several places formed sacculations in which the star shaped fecaliths were found. Microscopic examination of the appendix revealed the thickening of the wall to be due to the formation of dense connective tissue that separated and partly replaced the muscle fibers of the muscularis and extended to the serosal surface. The tissue was infiltrated by plasma cells and many eosinophile leukocytes and histiocytes. These cells were scattered diffusely and formed a dense accumulation about the blood vessels. The mucosa was thickened, because of the general hyperplasia of the lymphatic tissue which contained numerous germinal centers. The glands were fairly intact and the stroma was infiltrated by eosinophile leukocytes. The microscopic diagnosis was that of a hyperplastic chronic appendicitis and periappendicitis.

The fecal concretions were yellow brown and their surfaces were rough and granular. Two of these fecaliths, Fig. 2, were star shaped, one with a central body and five rays and the second with four rays. The third



Fig. 2. Star shaped fecaliths.

fecalith assumed the form of an H. A cross-section of the two star shaped fecaliths showed a nucleus which consisted of a soft gray brown granular ovoid mass about 2 and 4 cm. in diameter respectively, which appeared to be inspissated feces. This nucleus was surrounded by narrow gray-yellow lamellations that extended into the spinous processes. The outer lamella was somewhat thicker and more granular than the inner layers and formed a shell around the entire concretion. The H shaped concretion failed to reveal any definite gross nucleus, but the lamellar arrangement was similar to that of the other two fecaliths.

Chemical examinaton revealed the calculi to be composed chiefly of calcium oxalate.

Comment: The pathogenesis of these star fecaliths is probably governed by the same factors that cause calculi elsewhere in the body. As demonstrated by Schade,[5] calculi can be produced by the precipitation of a mixed solution of a colloid and crystalloid. As the colloid is precipitated, the precipitate has the property of forming in layers on the bottom or sides of the vessel or around a foreign object. During the process of precipitation the

crystalloids which are suspended in the colloid solution are carried down with the colloid precipitate, so that they appear as crystals in the amorphus stratum of the different colloid layers.

The appendix in the presence of stasis offers favorable conditions for the formation of calculi. The mucus secreted by the appendicular mucosa is an irreversible fibrin colloid which when precipitated from solution is deposited around foreign bodies or inspissated feces. Crystalloids such as calcium and magnesium phosphates and carbonates and occasionally calcium oxalate are precipitated with the colloid and are intimately mixed with the latter in the calculus. Retention of the calculus in the appendix over a long period will enable it to increase in size by the constant addition of colloid and crystalloid, so that the fecalith may become much larger than the lumen of the appendix. Such calculi are found in sacculations of the appendicular lumen. Prolonged stasis in the appendix may likewise enable more than one crystalloid to enter into the formation of the fecalith. The various strata of the calculus may therefore contain different crystalloids.

The structure of the crystals is an important factor in determining the shape of the calculus. This is demonstrated by the different forms the renal calculi tend to assume in relation to their crystalloid content. This relationship must exist for calculi formed elsewhere than in the urinary tract. In our case calcium oxalate was isolated so that like the irregular "star" or "Jack" shaped calcium oxalate calculi found in the urinary tract, the fecaliths herein reported assumed irregular forms.

The changes produced in the appendix were those of a prolonged chronic inflammation. The role that chronic inflammatory conditions of the appendix play in the pathogenesis of the fecaliths is debatable. Mild catarrhal inflammation of the appendix, probably, causes an increased secretion of mucus which in the presence of stasis establishes adequate conditions for calculus formation. Once formed, the calculi, unless expelled into the cecum, act as a source of constant irritation to the appendicular mucosa and stimulate the excretion of more mucus, which in turn furnishes the required colloid for the growth of the calculus. It may be, therefore, that chronic inflammation of the appendix may be both a cause and result of appendicular fecaliths.

SUMMARY

A case of chronic hyperplastic appendicitis is reported in which three star shaped fecaliths were found.

The calculi contained calcium oxalate to which is attributed their irregular shape, like that of calcium oxalate calculi met elsewhere in the body.

The hyperplasia of the appendix and of the ileocecal lymph glands simulated hyperplastic ileocecal tuberculosis.

30 N. Michigan Avenue.

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DIABETES MORTALITY IN NEW YORK CITY DURING THE THIRTY-YEAR PERIOD 1901-1931

Godias J. Drolet, New York (*Journal A. M. A.*, March 11, 1933), states that in New York City, from 1901 to 1931, the recorded mortality from diabetes has risen from 503 to 1,921; or, from a crude rate of 14.2 per hundred thousand to 27.1, and from a standardized death rate of 17.3 to 27.9. Among females, diabetes mortality has increased more rapidly; the death rate, standardized, having been 16.3 in 1901 and 35.5 in 1931; whereas among males, adjusted similarly, it has changed only from 18.3 to 19.0. Among men past the age of 55, the diabetes death rate in New York City has, however, measurably increased; among women, the rise begins earlier, namely, at 45 years of age; and their death rate has gone up markedly. The population of New York City is almost 30 per cent Jewish, and in this racial group the proportion of diabetic deaths to all other causes exceeds markedly that of the non-Jewish white population of the city. Among the colored races, the death rate has been lower than in the white race, but the same excess among females has been noted in both groups. While a comparative shortage of food during the World War has here too been followed by some diminution of diabetes mortality, the use of insulin since 1923 has been accompanied by only a slight recession, which has been entirely lost since.

DISCUSSION OF TECHNIC OF RADICAL BREAST OPERATION*

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While the technic of radical removal for malignancy of the breast has been sufficiently standardized, and apparently needs no further elaboration or addition, a discussion of the finer points in technic may not be out of place.

In no other operation is the technic so closely related to the anatomical and pathological factors concerned. We will endeavor to emphasize the motivation for the various steps in technic, as we believe that it makes for a safer operation.

We are not committed to any particular type of incision, but insist that it start on top of the shoulder, at its highest point. The incision then runs parallel with the outer half of the clavicle and curves down vertically on the chest wall, so that its concavity faces the axillary fold and is about two and one-half inches from it. From there on, it runs downward to about an inch above the upper circumference of the breast, where the line divides into two branches on either side of the nipple. The incisions encircling the nipple are about three-quarters of an inch from it on each side. About an inch below the lower circumference of the breast, these two lines meet again, running vertically downward along the outer border of the rectus muscle to one or two inches below the level of the umbilicus. (Figure 1.) This incision, as well as the rest of the operation, is done entirely with the high frequency knife. The rationale of this incision is based upon the fact that the final scar will be remote from the axillary structures and will prevent compression or binding of the arm. (Figure 2.)

The line of incision just described is deepened with the high frequency knife, the spurters are clamped and tied, while the less conspicuous bleeders are seared with the knife, thus avoiding ligation of many vessels. As the cut surface deepens and reaches the chest wall, the assistant folds a lap-pad on the entire edge and exerts gentle compression. The next step is the divi-

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Fig. 1. Showing healed incision for radical breast operation seven days post-operative. Note that the incision begins on the top of the shoulder at its highest point.



Fig. 2. Showing patient raising arm on side operated on to maximum normal extent on seventh day after operation.

sion of the pectoralis major muscle an inch and a half from its insertion in the humerus. The cut surface of the muscle is carefully seared. The thoracic insertion is divided until enough muscle can be lifted up from the chest wall to serve as a handle. The dissection is continued by grasping the muscular handle until the entire muscle is detached, enabling the surgeon to detach and lift up the entire mammary gland without handling it at any time. We believe that the use of knives, sponges, and the manipulation of breast tissue scatters carcinoma cells into the tissues, thus making neoplastic implants possible.

After the removal of the breast, the exposed chest surface is covered with warm pads. We believe that evaporation of the exposed surface is harmful and must be constantly prevented. The pectoralis minor muscle is next removed in a manner similar to that of the major. The muscular edges can be made conspicuous by slipping the index and middle fingers under the muscular surface and lifting it up. The cut surfaces of the muscles are carefully seared. Further protection by warm pads now becomes necessary.

These procedures cover about two-thirds of the operation and we would suggest that they be designated as Part 1 of the operation.

Part 2 consists in the anatomic cleaning of the axilla. We insist upon two points: first, primary exposure of the axillary vein for a distance of about two inches; and second, block dissection of the axillary space.

We believe that it is a decided advantage to primarily expose the axillary vein, as it is less likely to be injured if one works away from it rather than towards it. All branches of the vein and artery, which run almost perpendicular to the direction of the vessels are clamped with mosquito forceps and ligated with 00 catgut. We like to call this dissection *combing* dissection. This is started from the axillary vein towards the axillary pit and the upper end of the arm, taking everything in its course except the respiratory nerve of Bell, which is primarily isolated and not accidentally discovered. The mass is removed en bloc, and if carefully done does not need to be supplemented. Additional cleaning of fat now becomes necessary above the axillary vein and perhaps toward the insertion of the serratus magnus muscle, where masses of fat seem to be independent of the axillary mass.

Throughout the entire operation, the assistants see to it that the field of operation is well covered with warm pads. This completes the essentials of the operation, as it presumably removes all the pathologic structures in site.

The final touches consist in checking up bleeding points. At this juncture, it is quite important to mention that a number of small vessels on the chest wall often require ligation and that in clamping these, the apex of the mosquito forceps should be parallel with the chest wall rather than perpendicular, as most ambitious assistants and even surgeons have a tendency to do. The force of such clamping, especially if heavy forceps are used, frequently tears the intercostal muscles and exposes or even occasionally injures the pleura. The high frequency knife will take care of most bleeders, although injury to the pleura is possible even with this procedure. The entire cut edge of the skin is now gone over with the high frequency knife to destroy any possible implants and to complete the searing of bleeding points. This knife is subsequently used on the chest wall for the same purpose. This we consider a very important step in the operation, because it cuts off all lymphatic connections in all directions.

We next sear again the cut surfaces of the pectoralis stumps as well as their surfaces. In this way, we are reasonably certain to divide the accessory lymphatic trunks which are occasionally present and are known to pierce the substance of the pectoralis major muscle. By way of legitimate criticism, it may be apropos to remind the reader of the technic of Bryant of London, who for many years used the pectoralis muscle as a protective pad against the axillary space. A similar technic was used by J. B. Murphy. We feel that they were both in error when they thought that recurrences in the pectoralis muscle do not occur, on the ground that the muscle itself is free from lymphatic connections with the breast proper, the lymphatics traveling along the fascia.

Finally the lower part of the incision is gone over with the high frequency knife in the manner suggested above until the upper end of the rectus muscle is exposed. Fascial coverings are incised with the knife perpendicular to the long axis of the rectus muscle, curving the incision

inward and outward until the chest grooves are met. The object of this last procedure is to cut off lymphatic connections between the sheath of the rectus musele and the chest wall. This has been described and proven by Handley as an avenue for direct carcinomatous invasion of the liver, metastases sometimes occurring in the liver before there is an invasion of the general circulation.

The operation being completed, the two cut edges are temporarily approximated to survey, as it were, the final alignment of the incision. A stab wound is made in the flap of the axillary line and a large cigarette drain inserted.

The skin is approximated with silkworm gut only at two points, the rest of the incision being put on stretch and approximated with skin clips. We mentioned before that carcinoma cells may be scattered into the tissues during the surgical procedure. Likewise, cancer-cell implants may be introduced into the substance of the skin when it is pierced by the sharp silkworm gut needle. It therefore becomes obvious that any method in which the skin is sutured may be subject to cancer implants. An ideal method is one which eliminates all suturing. This can be accomplished by the general use of skin clips or by the approximation of skin edges with adhesive plaster strips sterilized over an alcohol flame.

While asepsis is the rule of all good surgery, we often wish that some infection might occur in this operation. We base this paradoxical and seemingly unscientific statement on the experiences occurring in the practice of Dr. Schrager. One such case may serve to illustrate the point. A large, fungating, yet entirely local carcinoma (without evidence of metastases) was operated on merely to remove the foul-smelling mass, and without any hope of cure. The operative area became extensively infected by a staphylococcic organism. Everything down to the ribs and clavicle sloughed out, leaving a clean, granulating surface after four weeks. This area was subsequently skin-grafted. This obviously incurable case continued to live for ten years without any evidence of recurrence. The patient eventually died from pneumonia. Our conclusion from this and other cases seems to justify the statement that an extensive infection with recovery leads to an occlusion of all lymphatic avenues and a firm wall of connective tissue subsequently appears in all directions.

Reviewing our technic, we claim the following merits for the procedure:

1. The placing of the scar away from the axillary fold and axilla, thus permitting free range of motion of the arm soon after the operation, and continuing thereafter.

2. The use of the high frequency knife in searing smaller vessels and lymphatics, and otherwise expediting the technic which, we feel, lessens the time of the operation and avoids physical insults which favor malignant implants.

3. The removal of the breast without handling it at any time also obviates carcinomatous implants.

4. Searing all the margins of the incision as a final procedure, and cutting off of the fascial connections with the serratus magnus and especially the rectus muscle insures against local recurrence and early atypical lymphatic metastases, such as those in the liver and pleura.

5. Closure of the skin by methods other than suturing.

Finally, we have been able by strictly adhering to this technic to finish the operation within one hour and occasionally in a little less time.

INCREASED SUSPENSION STABILITY OF THE ERYTHROCYTES: ITS FREQUENCY IN ALLERGIC INDIVIDUALS AND THEIR RELATIVES

Kamil Schulhof, Chicago (*Journal A. M. A.*, Feb. 4, 1933), points out that an extremely slow sedimentation rate of the erythrocytes is a constant symptom in allergic persons unless they show evidence of a complication, especially infection, which tends to accelerate the sedimentation. As an infection may mask the expected slow rate, so may an allergic individual show a slow rate even in the presence of a serious infection of short duration, such as a gangrenous appendix. The interaction of the two opposite tendencies should be taken into consideration in the diagnostic and prognostic evaluation of the sedimentation rates. Sudden postoperative mishaps may occur in patients with abnormally slow rates. Besides the patients with known allergic conditions, a slow sedimentation rate seems to be fairly constant among patients with lumbago. Liver treatment seemed to account for the slow sedimentation rates in other patients. The frequency of slow sedimentation rates among apparently nonallergic close relatives of allergic patients is striking and deserves a closer investigation. A difference in the technic may partly explain the fact that the slow sedimentation rates have been overlooked clinically.

DIETING

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ELGIN

Has this prolonged period of depression any benefits? Do the people eat more of the simple foods which are less refined and therefore better? The answer to both questions is yes for the majority of people. However the matter of dieting is still out in front with a large group of society folks. Apparently the pendulum is starting the backward swing.

Women in general, who have so many little group meetings at nearly all of which some eating of food rich in carbohydrates constitutes an important, often the most important, feature of the party, are in the larger group of offenders.

Since the followers of Dame Fashion believe it is the proper thing to be slender, dieting is a popular subject for discussion at social clubs and elsewhere. It has become a fad. They want to be thin regardless of proportion or distribution of body weight. Many times in recent years, mothers have come to this office to council about that lean daughter and wanted something done "to build her up." The daughter invariably would object "I don't want to be fat," confusing of course the two conditions of good nutrition and obesity.

For sake of brevity we may state that there are two causes for too much fat deposit. Too much fat producing food eaten is the cause in the vast majority group. In the minority group the cause is disfunction, or disease of certain glandular structures, or the lack of endowment of them.

All methods of reducing are improper unless there is a sensible reason for it. The desire to be beautiful as measured by the rule of fashion is the controlling motive.

There are three essentials in a beautiful human figure. A well proportioned framework, skeleton; The soft parts covered by the skin with its embellishments; and *health*.

The human frame is upholstered, as it were, with internal organs, muscles, tendons, fascia, nerves, bloodvessels, and a liberal distribution of fat covered by the skin. Viewed externally, the finished product presents a series of long and short curved lines. If these lines are of the right proportions, they constitute beauty. The eyes, eye brows, hair, teeth, and fingernails are only embellishments. Those who do not have a well proportioned skeletal form can never be the most beautiful, however they may enjoy good health.

Improper dieting may invite disease by lowering the resistance. Disease may change the shapely figure either in the skeleton, soft parts or both and result in an ugliness of form.

The danger of lowering the resistance to disease is obvious.

Physicians with considerable experience, have seen disastrous results from unwise dieting.

Health is essential to beauty but it is quite compatible with homeliness. Ask your family physician what to do when that urge to reduce comes on you. Dame Fashion is not a good anatomist and rates poorly as a physician.

Since many of the laity read this journal, this article is written primarily for them.

QUESTIONING THE SKIN*

Arthur W. Stillians, M.D.
CHICAGO

After discovering the cause of tuberculosis, the great scientist, Robert Koch, continued to pry into nature's secrets. Working with guinea pigs, he noted that if he injected living tubercle bacilli into the skin of a healthy guinea pig nothing happened for from ten to fourteen days. Then the skin at the point where the injection had been made became red and swollen, and broke down forming an ulcer which refused to heal. Professor Koch inferred from this that the skin of a healthy animal had no power to resent the presence of the germs and their poison, but later acquired this power to a moderate degree, enough to cause an inflammation, not enough to heal it. When he chose a guinea pig which had been ill with tuberculosis for some time, the injection of living or dead bacilli caused a prompt reaction on the second or third day, which ulcerated and soon healed. Here, he reasoned, the power to resent the presence of germs and their poisons appears much more quickly and strong enough to result in early healing. The skin has become more powerful to overcome the poison, and has been made so by the general infection.

*Radio talk given from WAAF November 4, 1933, for Educational Committee, Illinois State Medical Society.

These observations led him to the discovery of tuberculin—an extract of tubercle bacilli.

Some years later, Von Pirquet, the great children's specialist in Vienna, used this fact to question the skin of the patient as to the presence or absence of tuberculosis in the body. Tuberculin is rubbed into a scratch on the skin of the patient. If the skin responds with inflammation within a certain time, the answer is "yes, there is tuberculosis somewhere in this person's body." If the skin does not respond, the answer is "no, no tuberculosis."

This test, with its modifications, has been of great assistance in the diagnosis of tuberculosis. It has also taught us much about sensitization, the acquired ability to react with inflammation to irritants that do not cause such a reaction in normal skin. This subject is being studied intensively; new facts and new view points are being constantly brought to light.

After bread has been exposed to the air for some time it is common to find greenish or gray spots of mold upon it. These are due to the growth of a tiny vegetable organism, a fungus. Similar organisms growing in the skin cause ringworm, a disease which takes various forms, often imitating eczema and other skin diseases and is not always easy to diagnose. One of our aids in the diagnosis is a skin test. A vaccine made from a growth of the ringworm fungus is killed, tested to be sure that all the organisms are dead and a very small amount injected into the skin of the patient's forearm. If within a certain time an inflammation appears at the point where the fungi were injected, the answer of the skin is read as "This patient has a ringworm infection somewhere."

An associate of Professor Pirquet, Schick, has devised a means of questioning the skin about diphtheria. The answer by inflammation in this case, however, does not mean that the owner of the skin has the disease. The skin answers "My owner is not protected against diphtheria. If exposed, he may catch it." There is not enough antitoxin in his blood and tissues to neutralize the poison injected into the skin. The physician, on perceiving the answer of the skin, administers toxin-antitoxin, which helps the person build up the needed protection. If the skin gives no answer to the test the doctor feels assured that even though exposed to diphtheria the person will escape infection.

The Dick test for scarlet fever, devised by two Chicagoans, like that just described, shows, if positive, that the patient is not protected. The skin answer is "This person is not protected from scarlet fever. He may catch it if he is exposed." If the skin makes no response to this form of questioning it means that the toxin injected has been neutralized and that the patient has enough power of this kind to protect him from the disease.

There are several less common infectious diseases in which skin tests give us important information.

Every one knows about the skin tests in hay fever and asthma. Urticaria, commonly known as hives, many cases of eczema, of spastic colitis, a cause of abdominal cramps, and of migraine, known as "sick headache" are in the same class as asthma and hay fever, all caused by "sensitization," a condition in which the skin, mucous membrane, or intestinal muscles have become very irritable, so that the mere contact of certain substances causes a great disturbance. The same substances cause no trouble at all to a normal person.

The skin is questioned to find out which of many substances is the offender. The scratch test, performed just like the Von Pirquet test for tuberculosis, except that other substances are applied to the scratch, often gives information of value. Soon after it became popular, however, it was discovered that its answers were not always reliable. When it said, for instance, that a certain patient was sensitive to pork and that patient happened to be a Jewish rabbi, the answer was decidedly open to question. Then it was found that many of these answers of the skin are "group reactions," that when a patient becomes sensitized to one substance he has also a certain sensitization to a whole group of chemically related substances.

It was also found that the answers of the skin vary from time to time depending on changes in the condition of the patient. Interpretation of these skin answers is not always easy.

More recently it has been found that simply placing a suspected substance on the skin, keep-

ing it there for 18 hours, more or less, will give better information in cases of eczema than the scratch tests. The upper layer of the skin, the epidermis, gives a better answer in this case than the deeper portion. This is called the patch test. It, too, varies from day to day and often is different on different parts of the same person. All parts of the skin are not sensitized. A patient of mine, for instance, was sensitive to one of the ingredients of an eye lotion; but only the lids of one eye were sensitized. No reaction occurred on the other side.

After the skin has given its answer, it is checked by removal of the indicated substance from contact. If the skin irritation subsides, the contact is renewed. If the irritation then returns, to disappear again with removal of the suspected substance, then, and not until then, do we feel quite convinced that the answer of the skin was correct. If these changes are not productive of the proper results, further search is necessary. As they try to visualize all the contacts possible to any one person in a day, the doctors thus questioning the skin realize as never before how complicated are our lives.

Of all cultivated plants, the primrose is the commonest cause of skin eruptions. A gardener complained of a severe dermatitis that kept him out of work. So long as he remained away from the plants his skin was clear; when he returned to work he soon noticed the torturing itch and the eruption. Of course, the primrose was at once suspected. However, patch tests were made with all the plants he ordinarily handled. Contrary to expectations, the answer came, "Primrose leaves and flowers are not guilty. The chrysanthemum is the guilty one."

So with a newly married couple, who were on the point of separation, because every time the husband, who was a traveling salesman came home he broke out with a terrific itching eruption. Several doctors said that there was an incompatibility of temperament; but the patch tests on the skin said, "No, the trouble is with the perfume that the lady uses." The lady gave up her perfume instead of her husband, and all was well.

These answers of the skin are being used in many lines of research. Our knowledge of sensitization, its causes, and the possibilities of treatment, is growing day by day and as a consequence our ability to relieve distress is becoming daily greater.

104 South Michigan Ave.

THE EVOLUTION OF MEDICINE*

R. H. McPherron, M.D.
CHICAGO

I am embarking on an adventurous and exciting proposal, and I invite you to come along with me. I shall try in my humble way, in the course of three short talks, to survey the story of the development of the science of medicine. Naturally, only the most interesting high spots will be discussed. In today's talk I shall speak of the origins of medicine; in the second, the middle period will be presented and in the last lecture some of the modern developments of this interesting and vast science will be outlined.

The origins of medicine began with primitive man, and arose out of natural human sympathy, out of a desire to help those in pain and distress. Mothers heard the anguished cries of their children, people saw loved ones suffering, they felt their own aches, and so they called upon the gods and searched out their accumulated experience to ease the suffering and cure the sickness.

But this was long before the dawn of the age of science. Before rational experimentation and the careful weighing of results in the light of known causes. The mind of primitive man in its attempt to understand the nature of the world about him was steeped in superstition and error. Primitive man could see no causal relation between an object, its shadow and the high sun; or between a sound and its echo. Winds, storms, clouds, sickness and death were to him the outward and visible signs of malevolent gods, demons, spirits and other supernatural agencies. He, therefore, worshiped the sun, moon, stars, the trees, fire, the winds, and looked to them for signs and portents to guide his life and health. Spirits of the dead, demons, or individuals with some mysterious power over the agencies of disease or their general well being, were feared; their assistance needed to be invoked, and their

*Series of three radio talks given over WJJD, for Educational Committee, Illinois State Medical Society.

anger propitiated. Incidentally, in some of the Southern states today, a negro who learns that a malevolent witch-doctor has put a hoodoo on him will, through his fear and belief, becomes very ill, indeed. He is relieved only by a more powerful hoodoo.

Ancient man lived largely under the open sky. He watched the rhythm of the heavenly bodies. He thought he saw coordinations between their movements and man's well being. Particularly was he struck by the close relationship between the lunar months and the recurrent illness of his women. Hence, the development of astrology, preserved today in the signs of the Zodiac. Every almanac is filled with remnants of this vast superstition—such as the desirability of preparing meats or planting grain at a certain time of the moon.

Weeds and leaves and roots and plants and berries, as well as hair and skin and blood and excretions of animals were the chief sources of medicine prepared and used by primitive men. Many things were used from custom, i. e., empirically, not on account of their usefulness, i. e., experimentally. However, experience taught the value of applications of heat and cold, and of the relief which may come from inducing vomiting or of blood-letting. Of considerable interest and wonder to us, but of somewhat less actual value to them, was the custom of trephining, or opening the skull down to the brain to allow demons to escape.

Probably the most important health lessons came to primitive man from his attempts to deal with the injuries, accidents, and bites of beasts and serpents. It was from these experiences that he began to learn the immensely important principal of the relation between cause and effect. Many of these injuries were disabling, and thus gave ample opportunity for observation, which is the true beginning of a true science. In this crude way medicine had its rise from the experience of recovery of some patients, the death of others; and the lessons of past attempts and their results were remembered. Man learned to distinguish the hurtful from the helpful, the useful from the useless. He gradually learned that cold under circumstances may produce pain in the chest, shortness of breath and secretion of mucus. Again, he noted the soothing effect of heat in this condition. When he used certain plants as food, he could scarcely fail to note the fact that some were followed by pleasant after-effects, and some by an acute distress.

Each illness was thus a source of learning and experience, and each mistake a reminder of what might better be avoided in the future. But the process was slow and laborious.

The three main staples of medical lore were, thus: 1, the power of spirits and demons; 2, the medical qualities of herbs and roots and other objects; 3, the wisdom inherent in the movements of the heavenly bodies.

The power to use and understand these staples became the specialty of real or often self-assumed experts, or "medicine-men." It was the duty of the medicine-man, who was invariably also the priest or religious leader, to appease the evil gods, invoke the good gods to aid them, offer sacrifices, brew the stews and broths which he believed indicated, study the stars, and vanish illness and pain or shame and disgrace thereby. It was he, too, who devised and distributed the amulets, talismans and medicine stones, as charms to be carried or worn.

Widely separated races of primitive man appear to have adopted almost identical means for this combating of illness and pain. Whether this is due to the phenomenon known to sociologists as the cultural diffusion, or whether it expresses a necessary fundamental similarity in the brain processes of all men need not in this series of brief talks concern us.

Let us leave the far distant and dark past with its superstition and ignorance, and come to the period of the opening of the Christian era. Here Greece, with its men of powerful intellect and ability to interpret cause and effect in the light of reason, attract our attention. Just to name a few of these men, I hope, will stimulate your further interest.

The thoughts of Hippocrates, Galen and Aristotle governed the minds and actions of men for centuries. Their writings are full of thoughts eagerly sought today.

We have seen that in the primitive man the physician evolved from the priest. In Greece he had a dual origin, from philosophy (or reason) and religion. They established schools where the anatomy and the physiology, or mechanics of the human body were studied. Methods of surgical operations were devised

and much attention was given to pure water supplies, sewage disposal, bathing, and infant and maternal welfare.

Aesculapius, the father of medicine, and Hygeia, his daughter, were Greeks. He, along with Aristotle and other philosophers introduced a more rational practice through the medium of thought and reason—but still failed to use experimentation—or the scientific observation of cause and effect. The inscriptions show that great attention was paid to diet, exercise, massage and bathing. Cleanliness and hygiene at last appeared worthy of consideration, but we shall see that in later centuries most of this was forgotten or lost, only to be re-discovered in the modern period of our own century.

Hippocrates preserved to us his experience and thoughts in writing. The present day much misunderstood code of medical ethics dates back to Hippocrates. He apparently considered his calling sacred, for the famous Hippocratic oath, which is followed by all true medical men, says: "While I continue to keep this oath unviolated, may it be granted to me to enjoy life and practice of the art, respected of all men in all times. But should I trespass and violate this oath, may the reverse be my lot."

2. MIDDLE PERIOD

In my first lecture I invited you to come along with me on an adventurous and exciting proposal. In the course of three short talks we are surveying the story of the development of medical science, limiting ourselves to discussion merely of the most interesting high spots. The first talk dealt with the origins of medicine. We saw that the three main sources of medical lore among primitive men were first, the powers of spirits and demons; second, the medicinal qualities ascribed to herbs, roots and other objects; third, the wisdom inherent in the movements of the heavenly bodies. We saw that these main staples were the monopoly of the medicine men of the tribe who were expert in appeasing the gods of evil, in brewing the stews and broths which cured disease, in studying the stars, in devising and distributing amulets, talismans, medicine stones and other charms to aid in banishing illness and pain. Toward the end of our first talk we touched briefly on the development of medicine in the time of the Greeks. We saw that in the time of Aesculapius, the father of medicine, great emphasis was placed upon thinking about illness, and less about superstition; but the important thing to remember is that even in the period of the Greeks scientific experimentation to discover the cause and cure of illness had not yet been discovered or adopted. Today we deal with the middle period in the development of scientific medicine.

During the period from the decline of the Grecian culture and the fall of the Roman Empire, to the end of the 13th century, very little was added to medical knowledge. In fact, all knowledge and culture suffered a decline during these well known Dark Ages. This was a period of depression in the advance of all civilization. The work of primitive man with the Greek additions was followed and reviewed and restated from century to century. In many countries the advice of the ancient writers was a law to be followed. Any one using an idea of his own was a dangerous man and subject to extreme penalties.

Then came the dawn of the 14th century—the Renaissance—the period of enlightenment, when science emerged from religious control, gave free vent to scientific investigation and has made constant advance up to our time.

Early medical training depended only upon an apprenticeship with a physician. But now great universities were founded where anatomy, physiology, chemistry and biology were taught. Thus with a single stroke was undermined the influence of ignorance, the father of quackery. Not that even today are we free from quackery. But it is being hunted out every day. People are wanting to know the training and standing of their physician, and not how good he himself says he is.

Paracelsus early in the 16th century studied widely, and must have seen science with a modern view. He was to medicine what Martin Luther was to religion—the spirit of revolt. He refused to follow blindly authorities whom he proved in the laboratory to be wrong. He emphasized the study of chemistry, botany, zoology—the natural sciences. He wanted to know more about plants, animals and the chemicals which he saw daily, salt, plant juices, blood, urine, animal tissues. He progressed through research and observation, and believed only what he could verify by experience and

experiment. He believed that neither books nor fluency, nor languages made a physician, but the knowledge of the things themselves and their properties. The business of a doctor was to know the different kinds of sickness, their causes, their symptoms and their proper remedies.

A tremendous forward step was taken when William Harvey discovered that the blood was not a stagnant pool but a rapidly circulating fluid, and initiated a study of its properties. The microscope, invented by an unknown Dutch glass grinder, made it possible to see for the first time the blood cells. In fact, the movement of the blood itself as it coursed through the tiny veins in the web of the foot of a frog. For the first time man could see the blood move inside of a normal, comfortable animal. Everything was looked at in the hope of finding other things like the little round specks floating in the blood. Respiration and body temperature were for the first time considered in their relation to health and disease.

The middle of the 17th century saw the profession thus far on its way. Certain objective features of disease were known, the art of careful observation cultivated, many remedies had been discovered, the coarse structures of man's body well worked out, and a good beginning had been made in the knowledge of how the machinery worked, nothing more. What disease really was, where it was, how it was caused, had not even begun to be discussed intelligently.

Quinine was the first specific remedy discovered. About 1650 a lady of the court fell ill with the ague. A friend advised the bark of a certain tree—she was cured. It was tried on others. They were all cured. Study of the bark by chemists revealed a white powder-quinine, today the universal remedy for malaria.

Digitalis, our great heart remedy, was accidentally discovered through the successful ministrations of an herb-doctor, who knew nothing about what she was using, but knew she got results.

Then came Jenner, a country doctor, who revolutionized thought and practice, with smallpox vaccination which reduced the incidence of that dread disease in Germany from 75 to 5 per hundred persons almost immediately. Men were following the dictum of John Hunter, "Don't think, try."

Then came Pasteur, Koch and Lister, using the microscope from a previous generation, began to try as well as to think. Out of their simple tubes and dishes and soups and broths came, not superstitious broths to appease angry spirits, but knowledge of bacteria, disease germs that can be seen and handled and controlled. They found these small germs in wine, in yeast, in the throat of a child dying with diphtheria, in a tuberculous lung, many different kinds, but they studied each one and proved to the world that these certain germs were always present in certain diseases, in short, they explained the cause of disease for the very first time.

Occasional emergency operations such as amputations had been done for many centuries. But they were undertaken with fear and trembling, by doctor and patient alike. Most of these were followed by severe infections, many by death. It has been only in the last half century, thanks to the study and experiments of hundreds of scientists, that one can undergo a major operation with assurance and relative comfort.

Queen Elizabeth summed up the hygienic status of the time, when asked about her use of the new-fangled bath tub which she had. She bathed the first of every month whether she needed it or not. It did not seem ridiculous to dispose of sewage in the moat about the castle and later use this same water from the moat for swimming and cooking or even drinking. But thanks to health study many modern changes were being made in the daily lives of the people.

Let me briefly summarize: In the middle period the use of true scientific knowledge came to give new direction and success to man's age long struggle with disease. The causes and cures were being discussed and studied intelligently. Germs were being isolated, schools were established. Success and achievement were the reward of the surrender of superstition and the acceptance of guided rational inquiry.

We shall trace these developments into the present day in our third and last lecture.

3. MODERN PERIOD

In my two preceding talks I have sketched the evolution of medical science through a series of upward steps—a primitive stage, in which it emerged from magic and superstition and religion; a stage in which the natural character of disease was recognized, and the importance of its study as a phenomenon of nature realized; a stage in which the structure and functions of the body were worked out; a stage in which the causes of disease were profitably studied, and a final stage, into which we have entered, the application of knowledge for their prevention.

"Prevention" is the watchword of modern medicine. How would you feel today if you knew that the great methods of preventing the common diseases were beyond your reach? If you could not obtain, if need arose, diphtheria antitoxin, rabies serum, serum to prevent tetanus or lockjaw, typhoid inoculation, insulin, toxin-antitoxin, meningitis serum, and many other proven measures?

Not more than a century ago sanitary experts began to discuss the miserable living conditions of the people. They pointed out as bad, but could not change, child labor in unventilated foul factories, unsanitary homes, lacking water supply, and poor or no soap. Most of the windows were sealed shut even in the basement homes on account of the high tax on windows. The clothing either could not be or frequently was not washed, and was worn until it actually fell off of the wearer. Windsor Castle, the home of the King of England, had dozens of reeking cess pools which were overflowing beneath it.

The poorest homes today have pure water, adequate sewage disposal, ice and heat—kings did not have these one hundred years ago.

Today, thanks to the accumulation of exact scientific knowledge, we have within a moment's call help for all emergencies and health needs.

Your family medical doctor has mastered the science of medicine and surgery in the best universities in the history of the world. He spent years and many thousands of dollars within the walls of schools, themselves having millions of dollars worth of equipment—laboratories, libraries, expert teachers and well equipped hospitals. He spent a year as an intern in some good hospital where he observed and assisted great physicians and surgeons. Finally, he is living in your own community, where his greatest ambition is to help you prevent a calamity in your home or community.

At the command of your physician or surgeon are the enormous libraries containing the accumulated experience of all times; the magazines weekly on his desk, with the daily experience of doctors all over the world, with the answers to problems just like your doctor and your community have every day; the 7,000 hospitals of the United States with investment of over three billions of dollars,—all these are his, and yours. Even in the small communities the hospitals are adequately equipped to meet every emergency and need.

One hundred years ago, the chances of surviving a surgical operation were so small that a guarantee of funeral expenses were often required on admission to the hospital. Today a sojourn in the hospital is almost as safe as a stroll down the boulevard. The hospital is a great hotel, with expert accommodation for the sick added. It is a model of cleanliness and order and routine. The great laboratories and trained doctors are ready and able to discover human weakness or disease, and the immaculate operating rooms stand ready to render their services quickly, efficiently and safely. Gentle hands allay the natural excitement, administer soothing remedies, and finally deliver the patient fully prepared to the hands of his surgeon; here a grateful anesthetic waves away consciousness, the patient is safely and comfortably relieved of his physical burden and in due time returned to his home.

One hundred years ago the nursing staff was inadequate and untrained. It was said that all that a nurse was supposed to know was how to make a poultice. The nurses were from the lowest strata of society. Today they must be high school graduates, and many of them have had one or more years of study in universities before beginning the required three or four years of nurses training. A more devoted and dependable group of women is difficult to find.

Forty years ago, appendicitis was almost unheard of, because it was not understood and therefore not recognized. Many people died of inflammation of the bowels, who today would have been operated upon early and relieved of

a pus filled appendix. Yet twenty-five thousand persons died of appendicitis last year—but only because they came too late for diagnosis and treatment. Almost one hundred per cent should be well and alive today. Accurate early diagnosis is the safest method of preventing many serious tragic results.

For hundreds of years millions of dollars and thousands of lives were spent in attempting to build the Panama Canal. Only failure was the result, not because of lack of engineering skill, but because men could not live there. Finally, a physician made it possible by one simple change in conditions. He eliminated the death bearing mosquito. Today the great Panama Canal is a monument to Dr. Gorgas and scientific medicine. The history of malaria and the difficulties overcome in discovering its cause is an interesting story.

Many of our most feared diseases are practically conquered. They at least are understood, and only waiting public knowledge and cooperation to wipe them off the face of the earth.

Cholera, yellow fever, malaria, typhoid fever, prison fever, the plague, black death, and many other dread diseases are almost completely gone, and will soon be largely of historic interest. Diphtheria, that great bearer of death to children, is fully understood, can be prevented by toxin-antitoxin, and cured if treated by antitoxin. Only lack of cooperation on the part of parents prevents its being eradicated. Tetanus or lockjaw and rabies are fully preventable, the latter curable. These rarely occur due to the fear of the people of their dramatic symptoms. A person may refuse to admit the presence of appendicitis or a goiter, but never lockjaw.

During the last decades great strides have been made in surgical diagnosis and technique, the treatment of tuberculosis, thyroid conditions and care of mothers and infants. One with early tuberculosis infection is not given up as gone, but is so carefully cared for that a large proportion of these people are returned to their homes well and strong.

Cancer we have always had with us. It has always received untold time and study. It is still an unsolved problem of our ablest minds. However, many cases can be and have been cured when treated early and properly. Many fake methods abound. Our only hope, in the light of present day scientific knowledge, lies in early diagnosis, and the use of surgery, x-rays or radium, singly or combined.

Thus in these talks we have traced the evolution of scientific medicine from the earliest struggles of primitive man with harsh nature; we have seen how he learned in his simple way to care for his family and himself in injury and disease; later disease began to be studied; the human body analyzed, and the final discovery that prevention, like possession, has many points in its favor.

6859 Stony Island Ave.

TUMOR OF THE KIDNEY: A REVIEW OF A SERIES OF CASES*

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A review of the records of renal tumors at the Cook County Hospital for a period of four years, 1929 to 1932 inclusive, is the basis for this report. Fifty-four patients with tumor of the kidney were admitted during this period. In many instances these patients presented a clinical picture which is not in accord with that usually described.

There is already an extensive literature on the subject of renal tumor to which there are constant additions, but I believe this brief review presents a few points of interest which warrant its presentation.

The cases were divided as follows: Three were retroperitoneal tumors, two of which involved the fatty capsule and produced hematuria. I feel that they can be included in this series. One was a large retroperitoneal lipoma which was explored but not removed. Four were embryomas or Wilms' tumor in children; all were advanced cases and, together with the retroperitoneal tumors, do not really enter into this discussion. Of the remaining forty-seven, three were tumors of the renal pelvis and one a large, benign adenoma for which I did a nephrectomy about two years ago.

The study of these cases impressed me as of considerable value for they present a cross section of the various clinical manifestations

*Read before the Chicago Urological Society, January 26, 1933.

of renal tumor. Some were admitted who showed frank evidence of tumor and metastasis and were practically terminal. Others, while not moribund, already showed metastases and required very little difficulty in diagnosis. Still others who had undergone nephrectomy previously—most of these were from other hospitals—presented themselves with metastases three months to three years later. A large number gave a definite history of lumbar pain and hematuria and had a tumor, all of which made diagnosis simple.

Pyelography confirmed or established the diagnosis in all but two cases in which a renal tumor was later found. One of these two was a man who had a hematuria with a doubtful mass in the abdomen but who showed cystoscopically a large stone in the bladder. The stone was crushed. The mass in the upper abdomen was thought to be a chronic pyonephrosis. Renal tumor was found at necropsy.

The other patient showed an apparently normal pyelogram. At operation for possible cyst-adenoma of the ovary a tumor of the kidney was found and the kidney removed. This tumor proved to be in the upper half of a double kidney which had a separate ureter that had not been catheterized.

The points of importance in this review are the following:

1. Nine of this series were diagnosed only postmortem or at operation or upon the finding of metastases.

2. Fourteen patients gave no history of urinary symptoms and in these patients urinary findings were negative while in the hospital.

3. Hematuria had occurred in only twenty-five of the forty-seven cases. It was usually a late symptom when the tumor was well advanced.

4. Tumor and loss of weight were the outstanding symptoms.

5. Local recurrences at the site of nephrectomy occurred in four cases.

Two cases previously diagnosed as carcinoma of the lungs showed on postmortem a primary renal tumor with pulmonary metastases. One had been diagnosed as carcinoma of the cecum but correct diagnosis was made postmortem.

Another diagnosed as tumor of the spine proved at necropsy to be involvement of the vertebrae secondary to extension of the renal tumor.

In one case there had been a spontaneous fracture of the femur. Findings postmortem were those of renal tumor with metastases. One patient had an osteoma of the radius removed. Biopsy showed renal tumor. Another had an osteomyelitis which had been curretted three times. Biopsy showed hypernephroma. One patient was operated upon for uterine fibroid; a renal tumor was found.

All who have had some experience with renal tumor can undoubtedly cite similar cases.

One patient with a tumor of the renal pelvis operated upon by me within the last month deserves special mention. This patient had, two years previously, been operated upon, apparently successfully, for tumor of the sigmoid. This tumor of the right renal pelvis was diagnosed by both Drs. Jaffé and Melnick, pathologists at the Cook County Hospital, as a metastatic carcinoma of intestinal origin. This, then, is a metastatic tumor of the renal pelvis, certainly a rare condition.

Another case which was diagnosed only after careful postmortem examination had been operated upon for tumor of the right kidney. This was very extensive and could not be removed. Necropsy showed a primary tumor of the prostate with retroperitoneal mass metastasis to the left kidney.

Another instance was a diagnosis by me of a left sided renal tumor. The mass, however, was fixed and grew very rapidly, almost from day to day. Further examination later revealed a small tumor of the left testis with metastases along the spermatic to the left renal vein.

One apparently early malignancy of the kidney showed upon nephrectomy considerable involvement of the renal vein. Another with a history of a tumor of two years' duration showed no infiltration into the renal pedicle. Two patients who had previously shown no evidence of tumor had at operation marked infiltration upward to the diaphragm. These were probably primarily tumors of the adrenal.

I have purposely not entered into the discussion of the pathology of these tumors. All the pathologic reports which were noted stated either adenocarcinoma or hypernephroid car-

cinoma. True hypernephromata are rare. As stated before, three were papillary carcinoma of the renal pelvis and one a benign adenoma.

The evidence of local recurrence at the site of operation seems to me to indicate an incomplete operation. The fatty capsule is frequently involved and, therefore, nephrectomy for tumor should be extracapsular wherever possible. If the tumor is large and extensive and extracapsular, nephrectomy is not possible; it is probably best not to attempt nephrectomy.

The most important points in this review are the frequent absence of urinary symptoms and the large number which were not diagnosed. Less than one-half of these patients were seen in the urological service.

104 South Michigan Avenue

THE TREATMENT OF PEPTIC ULCER WITH OKRIN; A PRELIMINARY REPORT*

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Experience indicates that gastric mucin is beneficial in the treatment of peptic ulcer.[1] Its value may be due to its viscosity and demulcent properties which enable it to protect the ulcer from chemical and mechanical irritation. In addition it may influence the synthesis of mucus by mucous membranes because it contains the necessary building stones of mucin, chiefly glycuronic acid (glucuronic acid).

Glycuronic acid is important not only in the synthesis of mucin, but also as a constituent of connective tissue cells. Ordinarily it is burned in the body, but it will combine with various toxic substances rendering them inert. Among the substances that thus appear in the urine conjugated with glycuronic acid are those containing the phenol group, indol, skatol, and others of this class. Glycuronic acid is evidently a normal intermediary product of metabolism. Although its origin is not known definitely, if it is not synthesized by the body it must be supplied by connective tissues of animals or in plants.

Many plants contain a mucilaginous substance rich in glycuronic acid. Therefore, we thought that the mucilaginous substances in various plants might be used with a benefit similar to that of gastric mucin. Among the plants studied by us, the pod of the okra plant (Abelmoschu esculentus) proved to be very rich in a soluble, mucilaginous substance that could be precipitated with 50% to 60% alcohol and prepared as a dry powder. This product gave a slight Millon's reaction for protein, contained 3% of nitrogen and no reducing sugar. However, it did give a Molisch reaction. When tested for "mucoitin" by the Leven method for mucoitin sulphuric acid, the yield was 19%. The material so obtained had a nitrogen content of 0.22%. The pod was analyzed for the amount of rind, inner fiber, and seeds as carefully as these could be divided. The seeds were removed readily, but it was difficult to remove the outer rind from the inner fibers. If the rind could be removed accurately, the percentage of the inner fiber would be materially increased. The results given are arbitrary. The analysis of the pod by weight was: seed 13%, inner fiber 36%, and rind 51%. The seeds contained no mucilaginous material excepting on the surface. The white inner fibers practically all dissolved in water and yielded a clear, viscous solution, while the rind formed a viscous solution containing coloring matter and insoluble fibers.

The material for clinical trial was prepared according to the following procedure. The okra pods were washed, and then ground in a food chopper, and the ground material stirred into ten volumes of warm water. After stirring the mixture and letting it stand from one-half to one hour, it was strained through muslin. The residue was soaked again in water, and strained. The extracts of the two strainings were combined, and 95% ethyl alcohol was added to make a 50% alcohol solution. The mucilaginous material gathered into long, tough strands which were worked together and removed from the solution. This material was washed repeatedly with 95% ethyl alcohol, then ground in alcohol, filtered from the alcohol, and washed with ethyl ether. It was necessary to remove the alcohol completely and quickly to keep the finished material from becoming insoluble. The material was dried and ground in a mortar to a fine gray powder which we called "okrin."

This alcohol-free powder retains its solubility and mucilaginous property in water for several months at least. It contains some yeast and mold spores, but is practically free from bacteria.

*From the Departments of Physiology and Medicine, Northwestern University Medical School.

Aqueous solutions of the powder standing at room temperature mold but do not putrefy. The powder may be sterilized by dry heat with but little loss of viscosity, but the aqueous solution loses viscosity on sterilization. It was tested for gastric secretagogues by perfusion of the whole stomach pouch of the dog, but was found to contain none. It is exceedingly viscous in aqueous soluton. A 0.5% solution takes 18.7 times as long as distilled water to run through a capillary pipette. Dissolved in distilled water it has an okra odor and taste.

Clinical Experience. The supply of okrin for clinical experiment was extremely limited. We therefore thought it best through this probatory period to restrict the use of okrin to intractable cases to avoid that large percentage of ulcer cases who have temporary remissions after any type of medical treatment. Three of the patients in the clinic having the most difficulty on other managements were selected. None of these patients was hospitalized; all were ambulatory.

C. W., male, aged 57, complained of recurrent epigastric pain for three years. A gastroenterostomy had been performed nine years previously for similar distress. Six months before our examination he was on Sippy management in a hospital. He continued to take alkali and milk and cream with slight relief. Roentgenological examination by Dr. James T. Case revealed a grossly and constantly deformed duodenal bulb, and a large diverticulum in the third portion of the duodenum. Practically all of the barium passing from the stomach during the fluoroscopic examination passed through the pylorus. The patient complained of some tenderness over the ostium of the gastroenterostomy, but also complained much more bitterly of tenderness over the region of the first portion of the duodenum. No demonstrable crater could be found at the gastroenterostomy opening, but the gastroenterostomy apparently was not functioning well. A fractional test meal showed a maximum of 56 clinical units of free acid and 68 total acid units. On introducing 200 c.c. of 0.5% hydrochloric acid into the empty stomach his typical pain was reproduced.

The patient was given two grams of calcium carbonate every hour, milk and cream every hour on the half hour, and fifteen drops of tincture of belladonna every four hours. He continued to have severe epigastric pain and vomited every night at about 3 a.m. After four weeks the alkali and belladonna were stopped and he was given okrin. One level teaspoonful of okrin was given in water every hour while awake, and three small meals were allowed daily. The patient reported that he had no pain or vomiting after three days of okrin management, but that he had slight nausea and dizziness, and that he had been eating melon of all kinds. After one week the abdominal tenderness and all symptoms had disappeared and the dosage of okrin was reduced to one teaspoonful every two hours. At the end of the third week the patient had reduced the dosage to six teaspoonfuls a day.

The okrin was taken for only three and one-half months because of the limited supply. Two and one-half months have elapsed since the okrin was discontinued without recurrence of symptoms. Re-examination roentgenologically at this time shows the barium passing through the gastroenterostomy opening promptly. No crater or evidence of marginal ulcer is demonstrable in the region of the new opening. The duodenal bulb is deformed as before. No particular difference in the appearance of the stomach as compared with the previous examination is noted. The stomach is deformed, evidently by the operation, but it is freely movable. There must have been an extensive perigastritis with adhesions to account for much of the gastric deformity.

W. H., male, aged 54, complained of a gnawing epigastric distress coming on from two to three hours after meals with innumerable recrudescences for the last ten years. There had been a loss of eight pounds in the previous two months. The pain had been relieved occasionally by soda, milk of magnesia, milk, or vomiting. For the previous four weeks there had been a sharper pain at the right costal margin which was sometimes worse after eating, but which was relieved by alkali or vomiting. Fractional test meal had a maximum free acidity of 48 and total acidity of 62 clinical units. A positive benzidene test was obtained with the stomach contents. Roentgenological examination by Dr. James T. Case revealed an organic prepyloric lesion with high-grade delay and an enlarged stomach.

After observing the patient for two weeks while on milk and cream hourly, an operation was advised, but refused. He was given one teaspoonful of okrin in milk or water every hour while awake. All symptoms were completely relieved on the second day. Re-examination three weeks later revealed a deformity of the pyloric end of the stomach and the duodenal bulb. The emptying time of the stomach was normal. Certainly there was an improvement over the previous examination when there was a rather high-grade gastric delay. At times the duodenal bulb had a fairly normal contour, but on most of the films it has a deformity which is not persistent. It is possible that this man has a prepyloric lesion with accompanying spasm and periduodenitis, producing this deformity of the duodenal bulb.

After four months of treatment the okrin supply was exhausted. The patient has had no okrin for two and one-half months, and contrary to instructions has eaten of everything, but has had no return of distress. Re-examination, however, shows marked spasm at the pylorus and persistent pyloric deformity.

A. Z., a male, aged 46, complained of epigastric pain of four months duration and a loss of thirty-two pounds in three months. Roentgenological examination revealed a grossly deformed duodenal bulb, the deformity being characteristic of duodenal ulcer. The stomach was hypertrophied and dilated, and a noticeable quantity of opaque material remained in the stomach after five hours. Ewald test meal had a free acid of 39 and total of 42 clinical units. After trying frequent feedings and soft diet for three weeks without relief he was started on okrin, taking one teaspoonful in water every hour and eating three meals with cooked vegetable and fruit. He had no pain, nausea, or abdominal tenderness after three days. After

two and one-half months of treatment no more okrin was available. Two months after stopping the okrin his distress had not returned and he had gained in weight. Re-examination roentgenologically reveals essentially the same appearance of the duodenal bulb deformity with practically the same amount of barium remaining in the stomach after five hours as before.

COMMENT

We feel hesitant to report observations of such short duration on only three patients. However, since considerable time may elapse before a supply of okrin may become available for use in a larger group of patients, we believe that the palliative results in these three cases are of interest. While we do not believe that the ulcers reported have been healed, the rapid relief of pain after such treatment may indicate a subsidence of the accompanying gastritis and duodenitis.

The fact that ulcers occur with normal or subaverage acidities and that some ulcers may heal without any lowering of acid values or in spite of an increase in acidity is evidence that other factors than hyperchlorhydria are involved in the chronicity of ulcer. It seems that only a small degree of acidity may be adequate for the acid factor, perhaps only enough to insure activity of pepsin. Mechanical factors then loom into importance in the production of chronicity of the ulcer and probably in determining its location. Mann, Morton, and McCann[2] considered "the active mechanical factor in the duodenum to be the force of the impinging stream ejected through the pylorus." They consider the mechanical factor in the stomach "to be the paucity of protecting rugae in the prepyloric segment, particularly along the lesser curvature with its poor blood supply, and the convergence of the lines of force as suggested by Aschoff." Any substance, therefore, which can be taken in amounts to protect adequately the mucous membrane from the force of impinging stomach contents and the friction of coarse cellulose foods should be of some value in protecting the reparative granulations and epithelial cells of an ulcer. This protecting substance might also protect the granulations from pepsin HCl digestion. Olive oil, cream, and other fats have been used frequently for a protective action as well as a secretory depressant action. Too much fat, however, causes nausea. The viscosity of gastric mucin makes it valuable, although it has been thought by some to be unpleasant and to contain secretagogues. Okrin apparently has a demulcent, protective action and contains no secretagogues. It is pleasant to take, and may be taken at frequent intervals without any untoward symptoms. Being a vegetable product it does not deteriorate or putrefy as do animal products. Because okrin relieved pain in these three cases that were not being relieved by other treatment, we believe that it has a palliative action which may be of value in the treatment of peptic ulcer.

303 East Chicago Avenue.

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THE DANGER OF USING GASOLINE FOR CLEANING

The recent case in which a woman was cleaning a garment with gasoline in the open air and far from any flame, when a blaze occurred and she was burned to death, has directed attention to this danger. When dry fabrics, particularly silk, are rubbed in dry weather, electric sparks can be obtained. When fabrics are washed in water no such effect takes place, because water is a good conductor of electricity without the need of the leap through the air which constitutes a spark. Gasoline, on the contrary, is a nonconductor and may on its own account give rise to sparks when subject to friction with insulating materials. Therefore those who have the handling of gasoline in quantity, through nonmetallic hose pipes, are careful to lead any electricity generated to earth by means of a chain or wire. Serious explosions have occurred through neglect of this precaution. The use of gasoline for dry cleaning involves a risk which the utmost care cannot quite remove. A correspondent in the *Times* states that to do the job indoors amounts to criminal negligence. If done in the open, not only should the greatest care be taken to keep away from the lights (invisible gasoline will stream across the ground for yards and ignite from a flame at a surprising distance), but it should be assumed that there is always a slight chance that the gasoline will flare up spontaneously by electrical ignition. It is recommended that any fabric should be kept beneath the surface of the gasoline and that actual rubbing, as in washing a garment, is unnecessary and should be avoided. The better plan is to squeeze and stir the article about with a stout stick. Finally it may be cautiously wrung out by hand. In general it is best to keep the hands out of the gasoline. The gasoline should always be dried out of the article in the open air, never in the house.—*A. M. A. London Letter.*

RELATION OF SKIN DISEASES TO INTERNAL SECRETIONS

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ROCKFORD, ILL.

The literature with reference to internal secretions in general is enormous. The task of selecting from this massive array the facts which bear upon dermatoses requires time and judgment.

It is soon discovered that the relationship between these internal secretions and diseases of the skin is less frequently direct than indirect, and therefore not usually apparent on the surface. This relationship, according to Gans, has been demonstrated by a series of clinical and pathological observations, but its specific significance in dermatology was elicited through the medium of experimental research from other aspects. An explanation of the relationship has been found in only a few pictures, while the significance of dysfunction of endocrine glands, whether of a single gland or several, is still largely obscure so far as cause and course of the dermatoses are concerned.

For a conception of the general pathology of endocrine disturbances, it must be understood that we are dealing only with symptoms or sydromes, the pathogenic foundation of which is still obscure. Oswald believes it best to consider the symptoms of endocrine disturbances as found in skin disorders rather than vice versa. He states that the coincidence of endocrine disturbance and the occurrence of skin lesions is not proof of a relation; the findings must be constant or there must be a good reason for them. Schalek feels that the endocrine glands undoubtedly play an important role in a number of skin conditions such as eczema, psoriasis, and lichen planus, but the relation between the endocrine glands and the pathological condition is so intricate that its correct interpolation is surrounded by difficulties. Oswald supported this view by stating that the endocrine system is variable in that the same disturbance in a gland will not always produce the same results. This is due to the interrelationship of the glands of the system; a dysfunction of one gland is not balanced by the other glands but rather causes dysfunction in them because of a lack of stimulation from the first gland. It is not a simple balance between the glands. For example, a hypofunction of the thyroid causes enlargement of the anterior lobe of the pituitary but the reverse is not true. If more than one gland is the seat of dysfunction the result will be the sum of individual symptoms and not a new group of special symptoms. In terms of dermatology the same is true, and we should look only for symptoms of dysfunction and not for a new symptom complex. A gland may have hypo- or hyper-function but may not have a perverted secretion without changing its histological structure. Ectocrine glands are unable to do this and neither are endocrine glands, as they have the same structure. Endocrine glands are very closely connected with the vegetative nervous system. Only a small stimulation is necessary to cause adrenalin to be secreted into the blood stream, and this stimulates the sympathetic nervous system much more than the primary stimulation. The sympathetic system is related to the central nervous system so that, indirectly, the endocrine glands influence this system, the one exception being the sexual glands. The central nervous system does not influence them. They are regulated or controlled by the pituitary, and it is influenced by the central nervous system. Thus the influence is very indirect.

In myxedema the skin is doughy and flabby but does not stay pitted from pressure. Folds of skin are produced as a result of wrinkling and fat deposit, and there is a certain roughness and dryness. Sweat secretion is stopped, and we may often find dermatitis or pyoderma, although the latter is not characteristic as it is secondary. The hair is dry, lustreless, and falls out, producing alopecia circumscripta. The hair may fall out everywhere except in pubic and axillary regions. If the condition occurs before puberty, these secondary sex characteristics are usually lacking. The nails are dry and friable. The chemical formula of the skin, its resorption, and reactions are different, and we find an increase in water in the subcutaneous layer. Urticaria, herpes, angioneurotic edema, eczema, and erythroderma are not typical but are secondary symptoms of thyroid afunction. Gans reported a case of urticaria of nine years duration which disappeared under thyroid medication, and Mumford reported a case of chronic urticaria with

thyroid deficiency that was relieved by thyroid therapy. Ravitch reported the same results in nine other cases. Schalek also reported a case of ichthyosis and hypothyroidism in an eighteen year old girl with a basal metabolism of minus eight who showed remarkable improvement under thyroid extract. Another case of exfoliative dermatitis in an eighteen year old boy with severe constitutional symptoms was given thyroid extract as a last resort and showed immediate and remarkable recovery. We may have any variation between normal and the picture seen in myxedema depending on the amount of dysfunction of the thyroid. At times only a few symptoms may be present, such as thinning of the hair, yellow or dry skin, or alopecia circumscripta. All of these deficiencies or symptoms may be restricted by treatment with thyroid, the difference between the congenital and adult types being that the latter require much smaller doses to obtain the same results. Skin symptoms are usually absent in the hyperplastic thyroid (large colloid goiter).

In hyperfunction of the thyroid we find a thin skin which is well vascularized. There is increased sweating of the hands, feet, and axillae, reflex blushing, urticaria, and sometimes purpura and eczema. Dermatographism is very marked and may go so far as to produce wheals. We may find areas of pigmentation or depigmentation and symptoms not unlike those of Raynaud's disease. Atrophy of the nails rarely occurs.

Disturbance of the parathyroid glands has not usually presented skin symptoms although the study regarding these glands has not been of any great extent. A few cases have been reported of herpes, pemphigus, urticaria, and tetany. In chronic tetany we may find nail changes, such as longitudinal and lateral grooves, and even paronychia. We may find hair loss and possibly calcium deposits in the skin.

The sex glands produce certain changes such as acne of puberty, seen especially premenstrually in the female, and growth of nevi.

Menstrual dermatoses include such changes as herpes premenstrualis, urticaria, erythema, and erysipeloid erythema.

Dysmenorrheal dermatoses include such conditions as dermatitis dysmenorrhea symmetrica, erythrocyanosis crurum puellaria, chloasma dysmenorrhea, and even purpura and impetigo herpetiformis. Then there may be symptoms like Raynaud's disease. These symptoms seem to come from the resorption of the corpus luteum but a specificity or predisposition is necessary.

Dermatoses of pregnancy include urticaria, prurigo, pruritus, papular and vesicular hemorrhagic exanthemata, herpes gestatonis, impetigo herpetiformis, lichen simplex, and again symptoms resembling Raynaud's disease. There are also physiological changes in the skin, for example, pigmentation. Adult castration may bring about urticaria, eczema, vitiligo, and pruritus.

Menopause dermatoses include edema, erythema, alopecia, rosacea, and chloasma. There are multiple causes for these findings, and hypofunction of the ovaries is only a portion of the cause for the above symptoms. Hypertrichosis may be caused by an increase of the cortical function of the suprarenals, and it is hard to believe that we will find an increased function in older age. It is to be considered rather as a loss of control in the growth of hair of earlier life.

Hyperfunction of the anterior pituitary produces a condition known as acromegaly, in which we find a thickened skin, enlarged papillae, and ectasia of the glands of the skin. The fibrous tissue is increased and becomes hardened, and there is a hypertrichosis with thickening of the individual hairs.

Hypofunction of the anterior pituitary produces a dry skin, hyperpigmentation in later stages, and lack of sebaceous and sweat secretion. Loss of the secondary hair growth is seen which sometimes involves the eyebrows and eye lashes, although the head is usually intact. The condition known as infantilism presents a tender senile type of skin.

The above data indicates that most of the skin changes that are due to endocrine disturbances are those influencing hair growth, pigmentation, and secretion of glands and deposits of the products of metabolism. This fact must make us very careful in arriving at a conclusion of an endocrine disturbance as a cause of dermatoses.

The same skin changes may be found in diseases of different glands, and the cause is

thought to be due to a correlation between the glands.

We may find pigmentation in hyperthyroidism and acromegaly, which is undoubtedly due to hyperfunction of the suprarenals in correlation with the above glands. We have no anatomical proof because no medullary change has ever been found in the suprarenals. The medullary portion decreases in hypernephroma, and yet we have pigmentary changes present; thus an increased function of the medulla cannot cause hyperpigmentation. The above facts destroy the theory that hyperfunction of the suprarenals causes hyperpigmentation, and in cases of hyperpigmentation with pregnancy or menstrual changes, a disturbance of the suprarenals has not been proven. It would seem that in these cases the sex hormone itself produces or causes the pigmentation. We know very little about the relation between increased pigmentation and the sympathetic nervous system. We do know that hyperpigmentation may appear with normal suprarenals in isolated diseases of the abdominal sympathetic nervous system. All of which does nothing more than indicate that the nervous system plays a role in pigmentations. Pigment may vary with the sex hormone, there may be a pigmentation in myxedema. In Addison's disease it is probably due to increased function of the suprarenal cortex. Thus we find it in hypo- and hyperfunction. It is impossible to find a cause for the above instances and to show a relation, because possibly the gland changes may have nothing to do with the pigmentary changes.

Hypertrichosis with hyperfunction of the suprarenal cortex and anterior pituitary seems to present a certain connection because there is an increase in hair growth associated with increased function of the suprarenal cortex. This may be secondary and the influence of the sex hormone primary. Disturbances of the nervous system have been shown to cause hypertrichosis, as shown by being associated with hyperidrosis. We may have a symmetrical diffuse hair loss in hyperfunction of the thyroid and an asymmetrical alopecia is a more or less constant symptom of myxedema. In the former case the loss of hair is due to a hypersensitivity of the sympathetic and the parasympathetic nervous systems. This is shown by the fact that it is associated with hyperidrosis. In the latter case the cause of hair loss is malnutrition of the hair due to a decreased function in all organs (myxedema). Hypofunction of the pituitary and sex glands may cause loss of secondary sex hair (pubis, axillae, etc.). Dysfunction of the pituitary causes loss of eyebrows and eye lashes, diffuse alopecia of the body, and loss of secondary sex hair. In this case it is not due to the sex hormone. Alopecia may be caused by peripheral nerve injury. Other causes such as fright, sorrow, etc., show the connection with the nervous system.

Keratoses bear no relation to the endocrine system except possibly the acne keratoses.

Calcinosis is thought to be connected with the endocrine system but there is no definite proof.

Acne bears a definite relation to the genital sphere of both sexes, particularly at puberty, and is never found in persons without sex (castrates, eunuchs, etc.). The bursting of the follicle and the ripening of the corpus luteum are seen in time relation with exacerbations of acne. Acne consists first of a hyperkeratosis closing up the sebaceous ducts and secondly an immigration of micro-organisms. Hyperkeratosis is due to disturbance of the endocrine system; if there is no secondary factor then there is no acne. Acne is not necessarily due to a disturbance of the sex glands alone as we may have an atrophy of the ovaries and hyperfunction of the suprarenals, (puberty praecox) and still have acne. The same holds true of seborrhea which is seldom seen before puberty or after the menopause. Schalek states that the passive hyperemia of acne rosacea or vulgaris may be due to the increased secretory activity of the gonads.

Oswald states that it is hard to believe that toxic substances of sex glands, circulating in the blood, are the cause of menstrual dermatoses; he would rather believe that the sex hormone is normal and that the skin reacts abnormally to it. As an experiment: in a case of menstrual urticaria, blood which was taken from the patient during the menstrual period and reinjected after the period caused a return of the urticaria, as during menstruation. The same blood, injected into normal women, gave no reaction. The same phenomena has been demonstrated in cases of dermatitis during pregnancy. Explanation for this phenomena is

that the patient's skin was sensitive to normal sex hormone of menstruation, whereas, the other women's skins were not sensitive. Impetigo herpetiformis may be another example although it has been found to occur in tetany also, in which case it is probably due to the parathyroids, with pregnancy the cause of such a dysfunction. Oswald has reported cases of tetany in pregnancy without impetigo herpetiformis and thinks that the real cause lies elsewhere, probably in a predisposition. There is no question but that there is an endocrine factor present but a predisposition must figure in the picture. This predisposition does not leave the patient and will recur with succeeding pregnancies and is very likely to be more severe. Many skin changes are related to endocrine disturbances only by a time factor, (i.e. coincidence), and this relation at times is very striking. As an example: a case of urticaria was reported to have been cured by thyroidectomy. From the above cases we may conclude that disturbances of the endocrine system do not usually cause dermatoses per se but cause a predisposition of the skin to those diseases.

Pemphigus has been found in amenorrhea and dysmenorrhea and cases have been reported of recurring pemphigus with each pregnancy, clearing up after delivery. Four cases remained present until after the first menstrual period and then cleared up. Cases have been reported of pemphigus clearing up during menopause and also with destruction of the ovaries by means of the roentgen rays. In the male there seems to be no relation to endocrine disturbance.

There is much in the literature regarding psoriasis and opinions vary a great deal. There is probably a relationship to the sex glands, as psoriasis rarely occurs before puberty but frequently appears at puberty. There may be an aggravation of the disease with menstruation, and cases have been reported of psoriasis being cured during pregnancy, also in a case of a woman with hypoplasia of the genitals and an amenorrhea. In one case, which presented a disappearance of symptoms during pregnancy, blood which was removed during pregnancy and reinjected two months later, cleared the psoriatic lesions which had appeared. Of all endocrine disturbances only the ovaries seem to have any effect on psoriasis, and even this seems to be indirect by changing the predisposition. The basal metabolism is normal in most cases of psoriasis.

Oswald believes that there is no connection between ichthyosis or scleroderma and the endocrine system and states that melanoderma is often found with hypofunction of the ovaries but never with changes in the suprarenals.

In conclusion we may say that except in pigment and hair anomalies, keratoses, nail changes, and transient erythemas, there is no pathology of the skin to give a perfect explanation of its relation to endocrine disturbances. Even acne needs explanation for its genesis.

The hopes of dermatology regarding the relation of the endocrine system are not fulfilled. This does not mean that the endocrine system does not have any influence on dermatoses. Endocrine factors are complimentary and determining factors in the course of dermatoses, and the sympathetic and parasympathetic nervous systems are influenced by the endocrine glands. The essential determining factors lie outside of endocrinology, for example, allergic factors.

We must not give up the study of this relation, as very important things are still to be learned and unexpected things may arise in the course of such study.

Talcott Building

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HER NEW JOB

A colored man injured in a motor accident died, and the insurance adjuster went to investigate.

"Did Washington P. Johnson live here?" he asked the weeping woman who opened the door.

"Yassah," she replied between sobs.

"I want to see the remains."

With a new sense of importance the dusky widow drew herself erect and answered proudly, "I'm de remains."

—*Wall Street Journal.*

A chemist says the first alcohol ever distilled was Arabian; which may explain those nights.—*Punch (London).*

Society Proceedings

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, Wednesday, March 1, 1933

Surgical Treatment of Tuberculosis..Carl A. Hedblom

Evaluation of the Surgical Risk.....R. W. McNealy

Deferred Operation in the Treatment of Periappendicular Abscess .....Karl Meyer

Discussion..... Ralph Bettman, Benjamin Goldberg, N. M. Percy, William Cubbins

Meeting, Wednesday, March 15, 1933

Program Sponsored by University of Illinois College of Medicine

The Management of the Eclamptogenic Toxemia .....F. H. Falls

The Use of Anterior Pituitary Prohormone in Menstrual Disorders .....W. H. Browne

The Use of Vehicles for Medicine. (With demonstration.) .....Bernard Fantus

Hypothyroidism and Cretinism in Children—Consideration of Some Special Problems .....I. P. Bronstein

General Practitioners' Night, March 22, 1933

RHEUMATISM

The Etiology and Pathology of Acute Rheumatic Fever.....Benjamin J. Clawson, Jr., Minneapolis

Physical Therapy in Chronic Arthritis..John S. Coulter

Classifications and Etiology of Chronic Arthritis .....Emil G. Vrtiak

Discussion..... Ernest E. Irons, Disraeli Kobak

GREENE COUNTY

Regular Meeting Greene County Medical Society was held in Carrollton, Illinois, Friday, March 10, 1933.

After a splendid chicken dinner the Society was called to order by the president, Dr. O. J. Gause, at 7:30 P. M. in the dining room of Hotel Lindsey.

Dr. W. H. Newcomb of Jacksonville read a paper on "Pulmonary Tuberculosis" which was illustrated by lantern slides, and was very instructive to the general practitioner. It evoked interesting discussion. Following the paper Dr. Newcomb showed a number of x-ray plates of the chest illustrating various types of tuberculosis as well as chest tumors.

The business session followed: Minutes of last meeting were read and approved. Correspondence from the State Society read and Dr. Wm. H. Garrison was chosen to represent the Greene County Society on advisory committee on medical economics of State Society. Moved by Dr. W. H. Garrison, seconded by Dr. O. L. Edwards that Dr. N. J. Bucklin, Dr. E. E. Jouett, and Dr. C. O. Bulger be appointed as a committee to arrange a clinic for Crippled Children. Motion carried.

Meeting adjourned at 10:00 P. M.

Wm. H. Garrison,
Sec'y.

VERMILION COUNTY

The Vermilion County Medical Society held their regular monthly business meeting at the Plaza Hotel Tuesday evening at six thirty o'clock. The dinner was served to about sixty members. Table decorations were furnished by Smither Brothers, Florists. Cigars and cigarettes were furnished by the Woodbury, Carson and Plaster Drug stores.

The Past President, Dr. Leo V. Fairhall who has been through a long siege of illness was given a grand ovation as he appeared at the speakers' table.

The committee consisting of Dr. E. C. McGavran of Sidell, Dr. S. M. Hubbard of Ridgefarm and Drs. J. G. Fisher, O. H. Crist and H. S. Babcock of Danville was appointed with power to act concerning some differences between the physicians and the township supervisors over medical attention to the indigent poor.

The physicians are making special arrangements to immunize school children against diphtheria. This is in accordance with a campaign undertaken by the new State Commissioner of Health, Dr. Jirka. The committee appointed to take care of this is Drs. A. J. Fletcher, O. H. Crist and F. M. Hartsook.

A motion carried to instruct our delegate to the State Convention to invite the State Medical Society to hold its 1934 meeting in Danville.

Miss Campbell, from the State Department for Care of the Blind, told of the hard time the "Silver Nitrate" bill was having in the State Senate. This bill is to compel the installation of an antiseptic in the eyes of the new born to prevent infection which causes so much blindness in infants. The doctores signed a petition to our State Senator Wilbur H. Hickman urging its passage.

Dr. Geo. Potter presented an interesting clinic consisting of a set of quadruplets he had delivered. They were three boys and a girl of about five months.

Dr. Herman L. Kretschmer, Professor of Genito-Urinary Surgery of Rush Medical College, Chicago, was introduced by Dr. J. L. Funkhouser as the speaker of the evening. Dr. Kretschmer spoke on "The New Method of Treating Prostatic Obstruction." He was a fluent speaker, a clear thinker, backing his statements by many lantern slides and data from case histories.

There were about sixty-five members and guests present for the lecture, many of them from adjoining counties and Indiana.

Respectfully submitted,
C. T. Cass, *President*,
Holland Williamson, *Secretary*.

Marriages

Peter P. Doering to Miss Marjorie Dorothy Sandquist, both of Geneseo, Ill., February 10.

Noble Murray Eberhart, Chicago, to Mrs. Florence Ingram of Westmont, Ill., February 7.

Eugene Falstein to Miss Charlotte Rosenfield, both of Chicago, Dec. 25, 1932.

Tadeusz Maryan Larkowski to Florentina Malachowski, D.D.S., both of Chicago, January 25.

Grant E. Royce, Harvard, Ill., to Miss Charlotte Wakeley, January 11.

Oliver E. Van Alyea, Chicago, to Miss Elizabeth Cameron of Milwaukee, February 11.

George W. Walbright, Metropolis, Ill., to Miss Dora E. Thacker of Danville, Dec. 25, 1932.

Personals

Dr. H. Kelekian presented a paper before the Seminar at St. Bernard's Hospital, Tuesday, March 14, 1933, at 9:00 P. M. His subject was "Clinical Diagnosis in Orthopedic Surgery," with case demonstration.

Dr. Budd C. Corbus spoke before the Peoria City Medical Society, in Peoria, Tuesday, March 21, and before the Will-Grundy Medical Society in Joliet, Wednesday, March 29. The title of his talk was "Transurethral Resection of Bladder Neck Obstructions"—a Motion Picture Presentation.

Dr. Joseph L. Baer addressed the Southern Interurban Gynecological and Obstetrical Society in Memphis, Tenn., on the subject of "The Third Stage of Labor" on February 13, and addressed the Mid-south Post Graduate Medical Assembly in Memphis, Tenn., on the subject of "The Cervix Uteri in Obstetrics and Gynecology" on February 14.

Dr. Bertha Van Hoosen was to have addressed the Ogden Park Woman's Club on March 15.

Dr. J. F. Jaros gave a talk on "Health and Personality" before the Kiwanis Club of Austin on March 16.

Dr. John S. Coulter gave a lecture on "Physical-Therapy" at the March 17th meeting of the Pre-Medical Pre-Dental Club of Y. M. C. A. College.

Dr. Joseph K. Calvin addressed the Park Manor Parent Teacher Association on March 17.

Dr. Arno B. Luckhardt gave a talk on "How Medical Science Protects the Child" at the March 20th meeting of the Mothers' Study Club of the O'Keefe School, Chicago.

Dr. John R. Harger addressed Will-Grundy County Medical Society on March 15. His subject was "Abdominal Pain."

Dr. Edward A. Oliver addressed the Lake County Medical Society on Tuesday, March 14, at Waukegan. His subject was "The Commoner Diseases of the Skin and Diagnosis and Treatment."

Dr. Don C. Sutton addressed the Aurora Medical Society on March 2, subject, "Treatment of Pneumonia." He also addressed the Coles-Cumberland County Medical Society on March 8, subject, "Arteriosclerosis."

The Educational Committee has been invited to arrange a series of lectures for the students of Morton Junior College, Chicago. The first lecture was given Wednesday night, March 22, when Dr. A. C. Ivy spoke on "Experimentation, the Method of Progress."

Dr. Meyer Solomon gave a talk on mental health at the March 22nd meeting of the Mothers of the Mayfair School, Chicago. He gave the third lecture in a series on "Mental Hygiene" before the Brainard Woman's Club on March 21, and addressed the Psychology Club of the Chicago Junior College the evening of March 22.

Dr. R. H. Jaffe gave a paper on "Carcinoma of the Lung" before the Will-Grundy County Medical Society at Joliet, March 22.

Dr. Arno B. Luckhardt addressed the Mothers' Study Club of the O'Keefe School, Chi-

cago, March 20, his subject, "How Medical Science Protects the Child."

Dr. Cyril L. Hale addressed the Woman's Club at Pontiac, Illinois, on March 21.

Dr. Josephine Young gave a talk on "Mental Hygiene" before the Chesterfield Woman's Club of Chicago on March 21.

Dr. Alex. A. Hershfield addressed the Woman's Auxiliary of the Aux Plaines Branch on March 24.

Dr. E. L. Cornell addressed the Alexander County Medical Society on March 24. He also showed the moving picture film, "Physiology and Conduct of Normal Labor."

Health Week will be observed in Illinois April 23-29. The Educational Committee has already received requests for speakers during the week from fifteen high schools and clubs in Whiteside County.

Dr. Eric Oldberg addressed the Kankakee Hospital Staff and the Kankakee County Medical Society on March 16, on Epilepsy.

March 22, Dr. Helen Kostka spoke over station WGN under the auspices of the Chicago Tuberculosis Institute. Her topic was "The Nursing and Social Side of Tuberculosis Prevention."

Dr. Oscar B. Nugent's motion picture of Primitive India has been in great demand since his return last year. He has lectured and shown his pictures this month as follows:

March 4, Oak Park Council

March 5, Woodlawn Park Church

March 8, Founders' Night, Riverside, Ill.

March 16, Belmont Hospital Staff Meeting

March 24, Arnold Memorial Church

March 25, Medinah Athletic Club to the Carson Pirie Scott City and Suburban Salesmen Association.

He showed motion pictures on the Holy Land as follows:

March 17, Convent of the Lady of the Cenacle

March 26, First Methodist Church of Austin.

Officers of the Chicago Orthopedic Club for the ensuing year are Drs. Robert O. Ritter, president; Jacob K. Meyers, vice president, and Daniel H. Levinthal, secretary.

Dr. Oliver S. Ormsby has been elected president of the Chicago Dermatological Society; Dr. James H. Mitchell, vice president, and Dr. Max S. Wien, secretary.

Dr. Andrew J. Toman has been appointed director of the House of Correction and Police Emergency Hospital, succeeding Dr. Frank J. Jirka, who is now state health officer.

Dr. Frances R. Vanzant, Rochester, Minn., addressed the Chicago Council of Medical Women, March 13, among others, on "Interpretation of Gastric Analysis (Norms of Men and Women)."

Dr. Charles G. Mixter, Boston, delivered the ninth Lewis Linn McArthur Lecture of the Frank Billings Foundation of the Institute of Medicine of Chicago, March 24. His subject was "Meckel's Diverticulum and Its Surgical Significance."

One section of the library of Michael Reese Hospital has been dedicated as a memorial to Dr. Heliodor Schiller, former member of the staff, who died Oct. 20, 1932. Volumes on surgery from Dr. Schiller's library form the nucleus of the section known as the "Schiller Memorial Bookshelf." A bronze plaque has been placed over the section. Contributions from staff members, friends, relatives and patients will provide a fund, the income from which will be used for the purchase of additional books on surgery.

Dr. James Bryan Herrick was one of thirteen elected to honorary membership, March 2, in the New York Academy of Medicine. They were chosen, it was stated, in recognition of "their outstanding contributions to medicine."

Ten of the new honorary members of the academy are foreigners. The other Americans are George Richards Minot, professor of medicine at Harvard university, and William Gibson Spiller, professor of neurology at the University of Pennsylvania.

Dr. Max Thorek addressed and gave a motion picture demonstration to the staff of the West Lake Hospital on March 7 on "The Surgical Treatment of Difficulties of Swallowing."

News Notes

—H. 433 proposes, in effect, that employees contracting any occupational disease in any employment be entitled to compensation.

—S. 296 proposes to levy an annual tax on physicians, amounting to 1.5 per cent of the difference between gross receipts from practice and $1,200.

—H. 325 proposes to eliminate those provisions in the medical practice act authorizing the licensing of midwives. H. 326 proposes to require both parties to proposed marriages to present certificates from licensed physicians that they are free from venereal disease.

—The establishment of a comprehensive clinic for the treatment of epidemic encephalitis at the Dixon State Hospital has been announced. Dr. Charles C. Rowley will be the resident physician in charge. A small group of children from 6 to 16 years of age will be given special attention. Dixon State Hospital is the only institution in the state where patients with post-encephalitis can be legally committed.

—The establishment of a public health council in De Witt County has been announced as the outgrowth of a diphtheria prevention campaign sponsored about a year ago by the De Witt County Medical Society. Membership is open to physicians who are members of the county medical society, officials of the schools, and two representatives of any other organization in the county interested and willing to participate in the activities and purpose of the council. A broad public health program will be carried on through committees.

—A transformer delivering 1,200,000 volts and a giant x-ray tube with a capacity of from 800 to 1,000 kilovolts are being installed at Mercy Hospital. The special building contains three floors, the first of which houses a 300 kilovolt transformer; and the second, a control room and a radium treatment room, and lead-enclosed cubicles. The treatment room for the high voltage roentgen rays is 10 feet long, 5 feet wide and 8 feet high. The tube will be activated by 10 to 30 milliamperes, so that the duration of treatment will be reduced to a fraction of the time formerly required. The radiation therapy department will be under the direction of Dr. Henry Schmitz.

—Under a plan worked out by the Chicago Tuberculosis Institute and Superintendent of Schools William J. Bogan, the tuberculin testing of school children in Chicago was begun recently. The test is performed only on children who present a signed statement from their parents authorizing it. The Pirquet skin test is given; roentgenograms will be made of positive reactors and records kept of all cases. When conditions are found which require observation or treatment parents will be notified and asked that the pupil be placed under the care of a physician. Case records will be available for the information of family physicians. The work was begun in the Lake View High School, and it is expected to continue it in other schools.

—A division for the treatment of private patients with contagious diseases has been opened at the Albert Merritt Billings Hospital, University of Chicago Clinics. Ten private rooms in the Billings Hospital are now available for this service, the number to be increased should the demand warrant it. The division is the only one of its kind in the city since the recent closing of the Durand Hospital. While the Chicago municipal contagious disease hospital and the Cook County Hospital accept indigent patients with contagious diseases, the Durand Hospital, a part of the McCormick Institute for Infectious Diseases, had been the only hospital where private patients with contagious diseases could be isolated. Directors of the institute were forced to close the Durand Hospital because of reduction in income.

—The Cameron Prize for 1933 has been awarded jointly to Drs. George F. Dick, professor of medicine and chairman of the department of medicine, Division of Biological Sciences, University of Chicago, and Gladys H. Dick of the John McCormick Institute for Infectious Diseases, in recognition of their work on the etiology and treatment of scarlatina. This award is made annually by the University of Edinburgh, Scotland, on the recommendation of its faculty of medicine. The prize amounts to about $685 (at the present rate of exchange) and is given annually "to a person who, in the course of the five years immediately preceding, has made any highly important and valuable addition to practical therapeutics." Other Americans who have been given the award in-

clude Dr. Harvey Cushing, 1924, and Dr. George R. Minot and Dr. William P. Murphy, Boston, 1930.

—Complete provisional statistics for 1932 give Illinois the lowest birth and death rates of record in the state, according to the state health department. There were 83,183 deaths and 111,523 births reported, giving rates per thousand estimated population of 10.7 and 14.4 respectively. The number of births in 1932 was 7,265 short of the 1931 figure and 29,914 below the 1924 record, the year of highest birth registration. New low death rates were recorded for measles with a rate of 0.7 per hundred thousand; diphtheria, 3.1; tuberculosis, 55; infant mortality, with a rate of 52 per thousand live births reported. Increases were noted in the death rates for heart disease, with 235 deaths per hundred thousand of population against a previous high of 221.5; cancer, 116 against 112.6, and diabetes, 26.7 against 25.7. Automobile accidents resulted in 2,104 deaths, giving a rate of 27.1 per hundred thousand as compared with 2,333 deaths and a rate of 28.7 in 1931.

—The Mid-Western Section of the American Congress of Physical Therapy will conduct a one day scientific program on Monday, May 15, at the Hotel Jefferson, Peoria, Illinois. This immediately precedes the annual meeting of the Illinois State Medical Society which commences on May 16. A splendid program has been arranged. The medical profession is cordially invited. There will be no registration fee.

—Donald A. Laird, director of the psychological laboratory of Colgate University, has been appointed to supervise the exhibit on sleep and fatigue for the Century of Progress Exposition, opening at Chicago in June. The exhibit, which is being supported by the Master Bedding Makers of America, will feature the actual use of apparatus used on recent studies of sleep and fatigue at several universities, giving visitors an opportunity to take some of the tests. It is expected to accumulate in this way a mass of data bearing on the diurnal course of fatigue.

Deaths

Emma Scribner MacKay Appel, Chicago; Northwestern University Woman's Medical School, Chicago, 1901; a Fellow, A.M.A.; for fifteen years medical examiner of the vocational guidance bureau of the board of education; aged 57; died, March 4, in the Women's and Children's Hospital, of cirrhosis of the liver.

Alexander Leon Brown, Chicago; University of Illinois College of Medicine, Chicago, 1930; aged 26; died, February 22, of acute cholecystitis with stones in the common duct and postoperative intestinal obstruction.

Michael Henry Cleary, Galena, Ill.; Pulte Medical College, Homeopathic, Cincinnati, 1878; also a lawyer; formerly member of the state legislature; member of the board of education; aged 79; died, February 2, of carcinoma of the stomach.

Frank Emmett Gearon, Chicago; University of Illinois College of Medicine, Chicago, 1909; a Fellow, A.M.A.; on the staff of St. Anne's Hospital; aged 52; died, Dec. 23, 1932, of myocarditis and nephritis.

Lucien Winslow Gordon, Equality, Ill.; Miami Medical College, Cincinnati, 1880; aged 74; died, January 8, of paralysis agitans and capillary bronchitis.

Duncan Brown McEachern, Chicago; Jenner Medical College, Chicago, 1906; a Fellow A.M.A.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1907; on the staff of the South Shore Hospital; aged 56. died, February 6, of heart disease.

James Palmer McGill, Chicago; Homeopathic Hospital College, Cleveland, 1884; aged 76; died, February 9, of pneumonia.

John N. Quillin, Villa Grove, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1884; aged 81; died, January 7, in Mount Vernon, Ohio, of cerebral hemorrhage.

John S. Sennott, Waterloo, Ill.; St. Louis Medical College, 1883; member of the Illinois State Medical Society; aged 71; died, January 3, of bronchopneumonia.

Joseph Sherlaw, Chicago; Long Island College Hospital, Brooklyn, 1895; member of the Illinois State Medical Society; aged 72; died, February 13, of cerebral hemorrhage.

Christopher May Thornton, Royalton, Ill.; Louisville (Ky.) Medical College, 1876; member of the Illinois State Medical Society; aged 82; died, February 9, as the result of a fall.

John Wesley Turner, Catlin, Ill.; Willamette University Medical Department, Salem, 1872; aged 93; died, Dec. 18, 1932, of basal cell carcinoma.

James Robert Watson, Danville, Ill.; Rush Medical College, Chicago, 1889; aged 69; died, Dec. 29, 1932, in the Lakeview Hospital, of cerebral hemorrhage.



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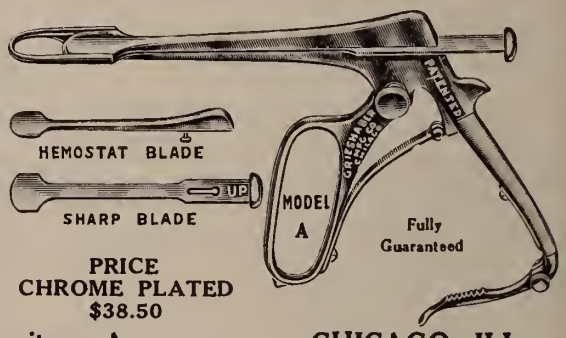
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Book Notes

CLINICAL PHYSIOLOGY OF THE EYE. By FRANCIS HEED ADLER, M.D. New York. The Macmillan Company. 1933. Price $5.00.

This work should serve a very useful purpose. It gives in simple terms the fundamental facts and generally accepted theories of how the eye functions. The work will prove a valuable aid not only to the undergraduate student, but for the graduate and practicing ophthalmologists as well.

PRINCIPLES AND PRACTICE OF OBSTETRICS. By JOSEPH B. DELEE, A.M., M.D., Professor of Obstetrics and Gynecology at the University of Chicago; Chief of Obstetrics, Chicago Lying-In Hospital and Dispensary; Consulting Obstetrician to Provident Hospital, to the Chicago Maternity Center, etc. Sixth Edition, Thoroughly Revised. 1165 pages with 1221 illustrations on 923 figures, 265 of them in colors. Philadelphia and London: W. B. Saunders Company, 1933. Cloth, $12.00 net.

In this edition the text and illustrations have been carefully revised. A few obsolete ones were omitted, and many new ones added. Local anaesthesia has been given prominence it has come to deserve, and the newer narcotics, of the barbituric acid group, receive a proper evaluation. A full description of the Ascheim-Zondek pregnancy test and a colored plate showing the reaction in the mouth are present. All that is known in the endocrino changes in pregnancy are presented concisely.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially one number every other month.) Volume 13, No. 1. (Pacific Coast Surgical Association Number February 1933) 247 pages with 90 illustrations. Per Clinic Year (February 1933 to December 1933). Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

The contributors to this number are fellows of the Pacific Coast Surgical Association. This association is composed of surgeons living in California, Oregon, Washington, British Columbia and Hawaii.

NEUROPATHOLOGY: THE ANATOMICAL FOUNDATION OF NERVOUS DISEASES. By WALTER FREEMAN, M.D., Ph.D., D.N.B., F.A.C.P., Professor of Neurology, George Washington University, Director of Laboratories, St. Elizabeth's Hospital, Washington, D. C. 349 pages with 116 illustrations. Philadelphia and London: W. B. Saunders Company, 1933. Cloth, $4.00 net.

In this work the author has summarized present knowledge of the changes in disease of the nervous system so that the pathologist will be able to interpret what he finds on opening the cranial cavity for examining prepared sections, and also so that the neurologist may visualize the diseased processes that are evolving in his patient.

DISEASES OF THE HEART. By SIR THOMAS LEWIS. New York. The Macmillan Company. 1933. Price $3.50.

This work is described for practitioners and students. It differs in its arranging and its outlook from other works on this subject. It is a clinical outline of diseases of the heart based on the author's long experience as a teacher and clinician, and presents the facts which the student or practitioner is apt to meet in his ordinary practice.

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EIGHTY-THIRD ANNUAL MEETING AT PEORIA, MAY 16, 17, 18, 1933

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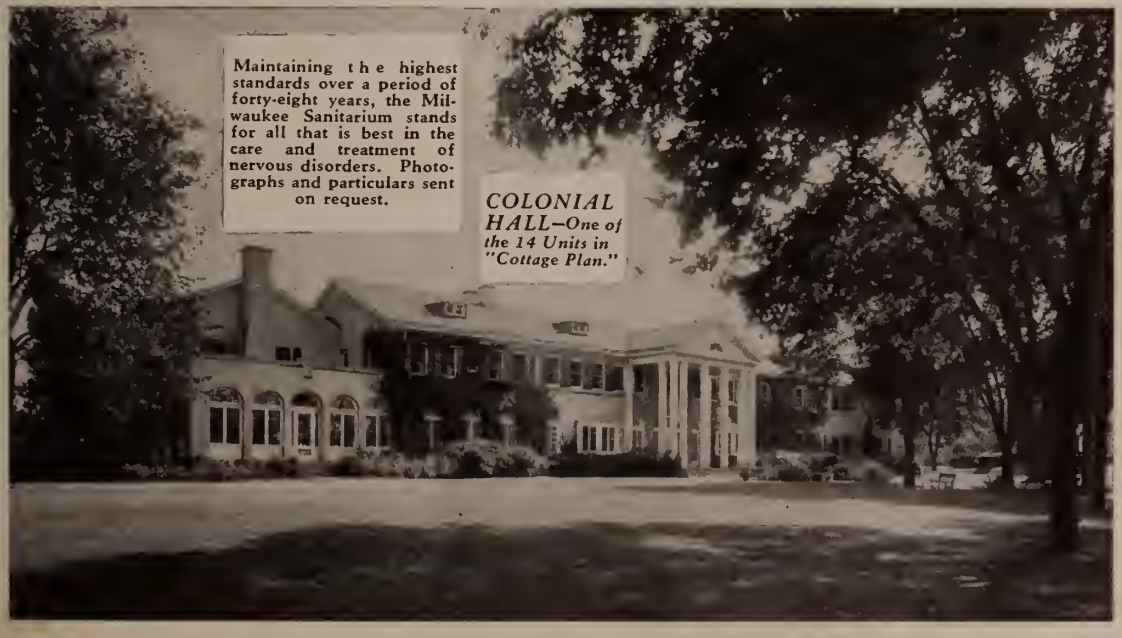
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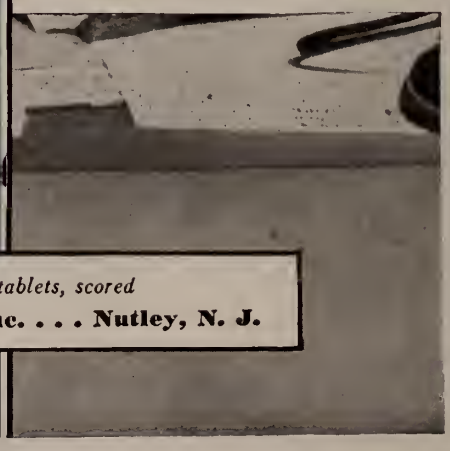
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DOSE IN MEASLES: 1 grain per year of age up to five years, the maximum being 5 grains regardless of age. According to the severity of the case the dose is given every four hours, or four times daily. The administration of Pyramidon is continued for about three days, or until the temperature remains below 100° F.

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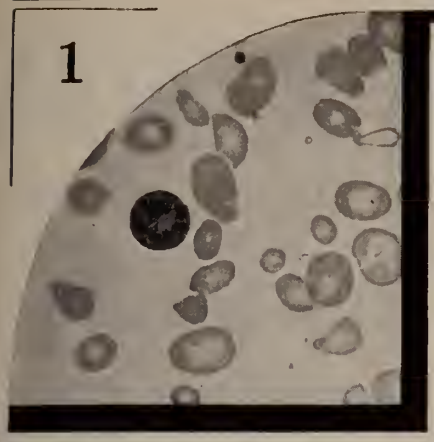
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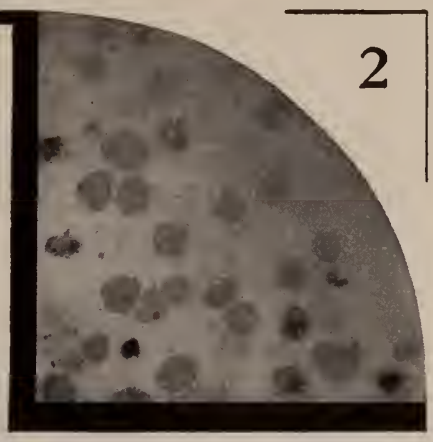
5 grain tablets: tubes of 10 and bottles of 100. 1½ grain tablets: bottles of 25 and 100. Elixir: 2½ grains per teaspoonful, 4 oz. bottles. . . .

264 M



At left—Pernicious Anemia pretreatment level. R. B. C. 820,000 per cu. mm.; Hb. 17%. Started Ventriculin 40 Gm. daily.

At right—Fourth day of treatment. Reticulocytes 54%; R. B. C. 1,120,000 per cu. mm.; Hb. 24%.



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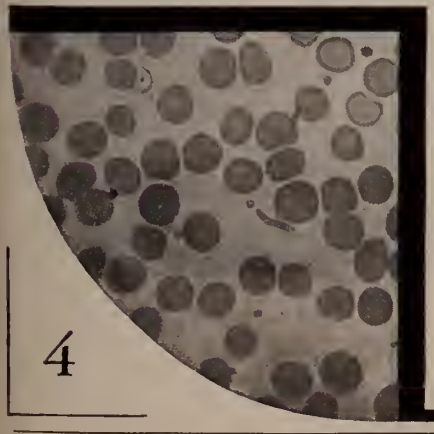
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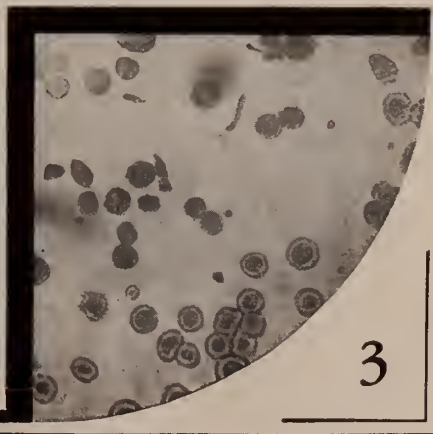
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At right—Seventeenth day of treatment. R.B.C. 2,440,000 per cu. mm.; Hb. 56%.

At left—Sixty-sixth day of treatment. R.B.C. 4,610,000 per cu. mm.; Hb. 84%.

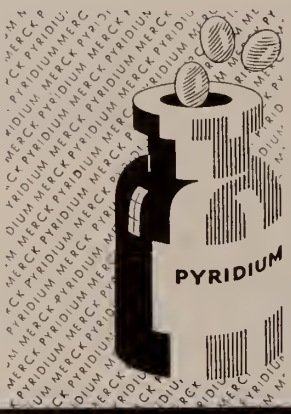


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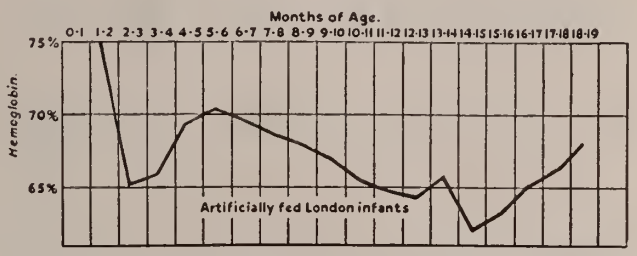
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Preventing NUTRITIONAL ANEMIA *in Infants through a Normal Dietary Regimen*

NUTRITIONAL anemia was present in 45% of the breast-fed and 51% of the bottle-fed in a group of more than 1,000 infants studied by Mackay.[1] Although this anemia was of mild degree, *it was sufficient approximately to double the morbidity among the artificially fed.*



Hemoglobin level in the blood of infants of various ages. Note fall in hemoglobin, which is closely parallel to that of diminishing iron reserve in liver of average infant. Chart adapted from Mackay.[1]

Anemia Prevalent

Commenting on this work, the British Advisory Committee on Nutrition writes, "This form of anaemia is prevalent among infants, especially those living under conditions of city life, and is attributed to a deficiency of available iron and possibly also of copper. Its most important feature is susceptibility to infection, particularly a liability to colds, otorrhoea, bronchitis, and enteritis, and a tendency for infections to become chronic."[2]

Iron, incorporated in powdered milk, should be given as a routine to bottle-fed infants, according to the recommendations of this committee in a report to the Ministry of Health.

Milk Deficient in Iron

Stored in the liver of the full-term infant is a supply of iron and copper theoretically sufficient for the first six months of life. But actually the reserve is subject to wide variation, probably because of (except in the case of prematures and twins) variations in the iron content of the mother's diet during pregnancy. Hill, for example, says, "If the mother is anemic herself, or if she has eaten little iron-containing food during the last months of pregnancy, her offspring is born with an insufficient iron deposit. . . ."[3]

	IRON	COPPER
Cow's Milk, 14 oz.	1.01 mg.	0.166 mg.
Dextri-Maltose with Vitamin B, 1 oz.	2.40	0.570
	3.41	0.736
Daily Requirement*	3.11	"traces"

It is generally agreed that breast milk and particularly cow's milk are markedly deficient in iron and copper. But when 1 oz. of Dextri-Maltose with Vitamin B is added to 14 oz. cow's milk, properly diluted (as at 1 month), the above increase in iron and copper results.

FOR the same reason that it is desirable to reinforce the milk supply of the infant with iron and copper, the trend is toward the introduction of iron-rich solid foods at an early age. The iron content of many foods is variable, however. Leichsenring and Flor[4] found that children's diets planned to contain 5 and 8.5 mg. iron actually contained only 3.25 and 6.5 mg., respectively. Mead's Cereal, higher than most foods in iron and containing standardized amounts of this mineral together with copper, can be administered as early as the third month, when nutritional anemia begins to appear (see chart above). Clinical studies by Summerfeldt[5] show that Mead's Cereal is capable of increasing the hemoglobin percentage of growing children.

	IRON	COPPER
Cow's Milk, 20 oz.	1.44 mg.	0.24 mg.
Dextri-Maltose with Vitamin B, 1½ oz.	3.60	0.855
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	6.74	1.185
Daily Requirement*	4.18	"traces"

When ¼ oz. of Mead's Cereal is fed to the 3-months-old infant receiving 20 oz. cow's milk and 1½ oz. Dextri-Maltose with Vitamin B, a significant increase in iron and copper takes place.

* The desirable iron intake for children according to Rose *et al*, is 0.76 mg. per 100 calories. Infant of 1 month (8¼ lb.) and infant of 3 months (11¼ lb.), both require 50 calories per lb.[6]

1-6 *Bibliography on request.*

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THE OFFICIAL ORGAN OF

THE ILLINOIS STATE MEDICAL SOCIETY

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Editorials

A WONDERFUL SERVICE FROM YOUR COUNTY AND STATE MEDICAL SOCIETY. THE BEST BARGAIN OF THE AGE FOR A PHYSICIAN IS MEMBERSHIP IN ORGANIZED MEDICINE. THIS PROVIDES THE DOCTOR WITH UNEQUALED ECONOMIC PROTECTION AT A MINIMUM PRICE AND MAXIMUM ETHICAL STANDARDS YOU NEED YOUR SOCIETIES; THEY NEED YOU!

The ethical physician needs his brother's hand in his, far more today than he ever did before, all down through centuries of civilization.

"United we stand, divided we fall," is the maxim that every doctor or surgeon worthy of the name must keep before his eyes.

To fight the steady encroachment of lay usurpers, the medical profession requires an organization. The local, the county, and the state medical societies, all branches of the great A.M.A., are the one weapon that the ethical physician finds ready to his hand,—dependable, tried and true and wise in the ways of council and defense.

Where one man alone would falter and fall, the mass pushes on from the days of Caesar and his classic phalanx, the rule has held good. It holds even better to-day.

You need *help,* doctor, from *organized medicine,* and *organized* medicine needs *help* from *you.*

The combat is not an illusory idea. There is nothing of the mirage in the fact that medicine is fighting this very moment, for its economic, legal and scientific existence. "Many hands make light work," and strength united means victory. The proof is written on the statute books of the land.

While maintaining membership and co-operating with ethically organized medicine each alert physician must keep an eye open to persuasive entangling alliances that are not what they seem. And so, doctor, be wise in your

avoidance of affiliation with outside agencies that are organized for personal or dubious profit, and with cleverly disguised motives, is something to which the medical profession must adhere.

Organized medicine, as vested in your county and your state society, provides the staunchest of economic and professional protection.

This is done at a minimum price. Organized medicine gives the members of its accredited societies, the maximum of efficient service, for a mere bagatelle. This is quite in line with the ratio of skill and science versus financial return with which the profession serves the public. And all of this is in juxtaposition with what the various cults and Isms levy upon the members of their numerous organizations.

For instance chiropractors in Illinois pay annual dues of $120 per capita, merely as a starter, for the up-keep of their organizations. Further, special assessments up to the sum of $500, are frequently the order of the day and a lot more that nobody even hears about.

To the professional organizer the ranks of the ethical physicians, seem fat fields, ripe for the harvest. Notoriously poor business men, as are the bulk of ethical physicians, to the unethical this body of highminded men, seem more than foolish, when they turn away from the primrose fields of dalliance. How to glean from the doctors, the tremendous sums of money that fatten the treasuries of the cults, is a scheme appealing to the promoters of "blue-sky" everywhere. Sugar-coated, promising more than is possible and even far beyond the probable, of performance, the overworked physician sees in such gold-plated junk a rosy future. Turning aside from the reputable safety of what organized medicine can do, and is doing for its members, the poor duped doctor risks what he cannot afford to lose, in a lay-dictated, profit grabbing concern, that thinks of its cashbox first and the doctor last. It's the same old tale of the gold brick versus the government bond. And the "co-operative clinic" is the best sandbag that the pre-empting layman has as yet used to beat up the gullible, harassed physician.

This point was recently and beautifully illustrated, by a near-stampede of many unthinking doctors, to a currently propagandized so-called "Medical Economic League," lay-begotten and lay-bred, and under a management of which the public press made a target for accusations of possessing an almost unsurpassed criminal record, to which neither denial nor disproof has ever been made.

Many a doctor can congratulate himself upon a narrow escape from what might have proven to be a direful entanglement. This instance cited is identified more especially with Cook county. Similar situations arise anywhere. Since then the woods have been overrun with similar crooked schemes.

Often in the columns of the Illinois Medical Journal attention is called to the unapproachable economic service to physicians that is given by the Chicago and the Illinois State Medical societies.

It seems wise to set forth additional data showing how stably and how ably the local medical society is the physician's bulwark.

Money spent in dues for a state or local medical society is one of the safest, surest investments a physician can make.

For the nominal dues of approximately $10.00 a man gets medico-legal protection and his fellowship in the society of his confreres. Affiliation with this large and representative body of men is of great value and importance to every physician.

While the figures vary in the respective counties, from $8 downstate to $13 in Cook County per year depending upon the local activities of the county society in which you reside. Illustrative of the benefits secured from such affiliation note the following:

1. For approximately $10 per year you get medico-legal protection; membership in your County and Illinois State Medical Societies and the Illinois Medical Journal. Membership in the above makes you eligible also to fellowship in the American Medical Association. Affiliation and association with this large and representative body of men is of great value and importance to every physician.

2. Medical Defense. Out of your annual dues paid, the trustees of the State Medical Society are required to turn $1.50 over to the "medical defense committee" for the protection and defense of members of the society against whom suits for malpractice or damages may be brought. For years the Illinois State Medical Society has been meeting all expenses of such litigation—that is, court costs, attorney's fees,

costs of appeals, witness fees, the cost of record—no limitation being placed on this sort of expense of an individual case.

This means that if you become a member of the Illinois State Medical Society you will be defended in every effective manner possible against suits for damages for alleged malpractice, as well as attempted blackmail. This one feature alone is worth many times the cost of membership. Private defense companies are charging $15 to $75 per year and upwards for the defense and indemnity.

Medical Legislation. Also $1 is set aside for a fund to be used by the Public Relations Committee for the purpose of combatting vicious legislation.

Members of the Illinois State Medical Society are also eligible to membership in any or all of the various affiliated special medical societies in Illinois.

3. Membership in the Illinois State Medical Society. All members of any county Medical Society are ipso facto members of the Illinois State Medical Society and will receive all publications of the State Society without any additional fees, dues or subscriptions.

Memberships in the state and local society are necessary before you can affiliate with the reputable, professional societies of the country and the American Medical Association. In some states a year's membership in the local society is required before they can secure a license by examination or reciprocity.

4. The Journal of the Illinois State Medical Society. This Journal, owned and published monthly by the medical profession of Illinois, is sent free to each member. The official organ of the Illinois State Medical Society, one of the largest and most influential state organizations in the country, is among the most comprehensive state medical journals both in point of circulation and editorial scope. It ranks highly, both in size and in influence with all medical journals. *Further, in the fight against economic evils oppressing the medical profession, the* Illinois Medical Journal *has been not only a leader, but ever a pioneer.* In the Journal is printed the proceedings of the Illinois State Medical Society; the Tri-State District Medical Society (Illinois, Iowa, Wisconsin, and Minnesota) and the Chicago Medical Society, which is the largest local medical society in the world. The Chicago Medical Society meets every week, and it has fifteen branches, proceedings of which also are printed in the Illinois Medical Journal, as well as of eleven affiliated societies, namely: Gynecological, Pathological, Ophthalmological, Surgical, Urological, Laryngological and Otological; Orthopedic, pediatric, neurological, Roentgen Ray, Medical Legal. On the programs of these various societies appear from time to time a great many of the most eminent men of America and Europe. In the Journal also is published the papers read and the reports of all meetings of the respective county society meetings throughout the state, as well as all the news of interest to medical men in Illinois and throughout the United States. The price of the Journal for non-members is $3.00 per year. It is sent to all members of the Illinois State Medical Society, as one of the perquisites of membership.

5. Reformation of Medical Conditions. Many reforms are being carried on which in previous years were impossible. The Medical Legislation Committee of the Illinois State Medical Society succeeded in having passed in 1927 by the Illinois State Legislature what is considered the best medical practice act in the United States. This Society has a representative as chairman of this committee in Springfield, and the committee is working to the good advantage of medicine in this State. The committee is receiving financial support from the State Medical Society as necessity requires. Every year different cults and branches of so-called medicine try to have special laws passed which will license them through examinations which do not conform to the medical practice act. It is only through large membership, financial and moral support that this type of legislation can be controlled.

Abuse of medical charities, illegitimate and unethical methods of practice, and all the other evils which have embarrassed the physician and reduced his income can only be successfully handled by a well organized and compact profession, able to take a positive stand on these matters and to carry out its decisions. There is in view (under thorough organization), relief from many of our present difficulties. There never will be devised a patent mechanism which will relieve the doctor of participation in our political activities. Physicians must govern

themselves or they will be misgoverned.

6. Eligibility to Fellowship in the American Medical Association. The only way in which a physician can become a member of the State or National organization is through the local society of the County in which he lives. The advantages and privileges to be gained through membership in this great association need not be enlarged upon. Fellowship in the American Medical Association includes *The Journal of the American Medical Association*, the greatest weekly medical journal published in the United States.

7. Regulations of Pharmaceutical Preparations. The American Medical Association has established a committee, known as the Council on Pharmacy and Chemistry, for the purpose of examining, analyzing and reporting from time to time, to the profession its findings on the most important proprietary preparations, such as the general practitioner is constantly being importuned to buy and prescribe for his patients. This movement, which is of vital importance to every practicing physician, deserves the support of all members of the profession, regardless of society affiliations. By becoming a member of your local society you will come more closely in touch with organized and systematic efforts for the uplift and benefit of the profession at large.

8. The Completion of Medical Organization in Illinois. The Illinois State Medical Society, today, comprises three-fourths of the reputable members in the State. It is to the interest of every physician in Illinois to complete and strengthen this organized and concerted movement on the part of the profession for the betterment of local conditions. The suppression of quackery, the prevention of enactment of vicious legislation, and the consummation of other needed reforms can only be accomplished by complete and thorough organization and unanimity on the part of the profession of the State. In this work the support and cooperation of every reputable physician is requested.

The welfare of your profession depends upon the support you give it. A well organized profession means greater respect and better compensation.

The Illinois State Medical Society desires your support and cooperation. Go to the next meeting of your local or county society and meet the other physicians of your neighborhood. Ask one of the officers of the society for an application blank, fill out the blank, either send or better hand it to the President or Secretary together with the fee for membership in your county society and thus secure membership in the organized profession of the State and participate in the benefits and privileges of medical organization.

Qualifications for Membership—Every registered physician residing in any county, who is of good moral and professional standing and who does not claim to practice any exclusive system of medicine, shall be eligible for membership. Now is the time to consider organized medicine your brand new band wagon and to come on and get aboard.

DURING A PERIOD OF TWENTY-FIVE YEARS NOT ONE PIECE OF LEGISLATION INIMICAL TO THE PROFESSION HAS BEEN ENACTED IN ILLINOIS.

ORGANIZED MEDICINE IN ILLINOIS HAS GIVEN A WONDERFUL SERVICE

1. Medical men throughout the country who occupy high official positions concede that Illinois is several years in the lead in medical alertness and in accomplishments in safeguarding the vital interests of the profession.

2. The medical profession in Illinois comes nearer than does any other state in the union of possessing a one standard for entrance into the practice of medicine. Illinois has almost one hundred per cent. single standard for medical licensure.

3. Illinois is one of the few states where physicians are not humiliated by having to sit on a licensing board with non-medical men.

4. During a period of twenty-five years not one piece of legislation inimical to the profession, has been enacted in Illinois, in spite of the fact that at each session of the legislature, from one hundred to one hundred and fifty bills affecting the status of the profession have been introduced. Illinois doctors are on the job.

5. The educational committee work of the Illinois State Medical Society is commended by everyone in official medical practice over the United States as being far ahead of that of any

other organized, ethical medical society in accuracy, alertness, efficiency and effort.

6. Illinois is one of the three states in the union that never had a co-operative Sheppard-Towner law.

7. Due in a large measure to the vigilance of the medical profession in Illinois America is not burdened with compulsory health insurance.

8. Parent-Teachers associations in this state have been induced to have pre-school examinations done at physicians' offices rather than at clinics.

These accomplishments together stand pre-eminent among hundreds of others that are necessary and beneficial to the profession and have been brought about by the untiring efforts, the unselfishness and personal sacrifice of time, talent and actual money of the men who guide now, just as many of them have done in the past, the welfare, the rights, and the individuality of the ethical medical profession in the state of Illinois.

Remembering that "eternal vigilance is the price of liberty" let there be no lagging now, even though the stoutest hearts may justifiably have grown wearied during the stress and storm of the last twenty or more years.

FALSE ECONOMICS HAVE WORKED MORE HAVOC WITH THE MEDICAL PROFESSION THAN EVEN WITH THE FARMER.

Since the scientific content of the Illinois Medical Journal is maintained so ably and at an unusually high standard by gifted contributors it leaves to the editor the job of unremitting propaganda for the economics of ethical practice—a propaganda all doctors need to digest.

The economic angle of medicine, needless to say, is the one tangent that ethical medical men are only too prone to underestimate and to overlook. Yet economics plus ethics effect efficiency.

This most unselfish of the scientific professions is made up of men who never pay any attention to economics until they find themselves landed high and dry. Yet the ravens left off their relief work back in the days of Elijah.

The task of being an efficient doctor keeps a man so busy that he neither has time nor inclination to watch for these ubiquitous and criminal impositions that are the daily bread, more or less, of the doctor everywhere. Because a doctor has an almost magical skill in dealing with mortal ailments and problems, a great many persons, patients or philanthropists get the idea that the doctor's subsistence, too, is another little matter of magic, rather than of mere money. Some day people will begin to get the inspiration of helping the doctor rather than of hobbling him as is done to-day by handicapping legislation, by lay encroachment of medicine by endowed foundations and part pay clinics and by the system of over-paid nurses.

Some day philanthropists will find out about the doctor. When that day comes, bequests and endowments will sing another tune. Instead of giving money and influence to schemes that rob the doctor of his just dues, say, even of his hard-earned and often hardly living wage, the shoe will be on the other foot. Right now false economics have worked more havoc with the medical profession than even with the farmer and that is saying a great deal.

Outside of the clergy, and in some respects, even more than the church, medicine is supposed to give more and to get less than any other institution in our complex modern life. There are of course a few exceptions but it is for the rank and file of medical men that this propaganda is waged. It is the undying dream of the Editor of the Illinois Medical Journal that in the not too distant future philanthropists will some day learn to think of medical men and to give the doctor those substantials from which to *draw the foundation upon which to erect his temple of service to the community.* Nor are we alone in our ideas on this point. Let quotation at length in this respect be made from an esteemed contemporary to the effect that

"By some of our readers it may be thought that we are harping too much on the economic phase of the practice of medicine. We fully recognize that the medical profession as a whole is shamefully imposed upon. A good percentage of the members of the profession in their struggle for a living income are in contact with obstacles of their own creation. The high cost of taxes and the depression affects the medical

man as it affects everyone else, but he does not seem to recognize the necessity of meeting these conditions by changes in business methods or practices which have existed for half a century. With a view to stimulating the individual physician to mend his ways and look upon his work as a means for securing a decent living and a competence for his old age, as well as being of humanitarian service, and to encourage the medical profession as a whole to create a better economic position for itself, we keep harping on the subject.

"A well known and busy public accountant is authority for the statement that many people apparently in moderate circumstances have substantial savings accounts and whenever sick, use the incident as a basis of delay in the payment of obligations and for seeking either a marked discount of the bill for medical services or donation of the entire account.

"Some people secure such service and pride themselves on their ability to secure concessions. Many doctors who are waiting upon a patron for the payment of a long standing account or who perhaps have settled with that patron for considerably less than fifty cents on the dollar, have been surprised to see that same patron blossoming out with a new and expensive touring car and note that the members of the family always wear the latest style in clothes.

"Medical men as a class never will be Shylocks in exacting the pound of flesh, but as a class they owe it to themselves to show a little backbone in adopting business-like methods in securing just compensation for their services and as prompt payment as is secured by the merchant or anyone engaged in any other line of work."

So the Editor keeps on expounding economics. Some day doctors at large will discover economics, as an essential of ethics. Heaven speed that day.

STIMULANTS IN OLD AGE

Osborne in the *Medical Journal and Record* says that caffeine in any form, when taken by elderly people, tends to increase nervous irritability and uric acid production and raise the blood-pressure.

Alcohol, in small quantities, tends to quiet the brain and nerves and equalize the circulation; it also has some food value.

Alcohol is preferable to tea and coffee as a mild stimulant for the old.

A BARGAIN MUST BE STRUCK BETWEEN MODERN MEDICAL PRACTICE, MODERN ECONOMICS AND MODERN DEFICIENCIES AND EFFICIENCIES. STATE POLITICS, STATE TAXATION, OR STATE STATUTES ARE NOT THE PANACEA

The past three decades of drastic change in commercial life is seeping into the realm of the arts and the professions. Now this change is pivoted upon that so-called social consciousness that is the latest human expression of a mortal attempt to bring to a more gracious level the glaring inequalities of civilized existence and while the intent is excellent the method in the main would seem open to criticism, though worthy of study, compilation and possible adaptation.

Quantity production, standardization, specialization with all its lack of individual relationships and a general substitution of mass administration is the keynote of this new distribution. The individual and his private woes are not at this moment the especial object of community consideration. The world is growing too big. The barter and exchange of international markets have forced these new concepts upon business heads. Unfortunately this has not always eventuated in cases of the necessary arts and the vital professions such for example as the ethical practice of medicine. As with others in the same classification of human endeavor the medical profession is still trying to mix oil with water. In other words the medical profession continues to try to measure the protean ramifications of the current economic system by the yardstick of an ante-bellum, early American idea that is at once all individualistic and forsworn to the best ends and ambitions of individualism.

While the world is still divided upon the best systems for making conform the individual exigencies of human personal life, as exemplified in nature's processes and performances, to the set schedules of a machine age in an era where to date the groups eschewing classification are machine control of the weather, the corn crop and animal and human processes of life, death and propagation, the medical profession almost more than any other is face to face with the necessity for doing practically this thing. The famous old family physician

finds himself put to it to continue with his work with the former skill and success under circumstances that literally change him from an essential part of his patients' most intimate lives into a non-essential and extraneous automaton.

Instead of a link between the here and the hereafter, who was a tower of strength, and a fountain of consolation, the modern complexities of medical practice and the pressure of modern economics are substituting for the old fashioned family physician a system that brings out perfect machinery and perfect routine whether it produces perfect medicine and perfect practitioners or not.

And right here is the gist of the problem to be studied by the man who would make the practice of medicine a paternalistic matter.

The answer would seem to lie in the successful divination as to exactly to what degree the functions of nature can be reduced to the lowest common denominator of the card index.

And in this classification of the problems of nature must be included those perplexities of soul, body, and individual self that can be solved, adjusted and eased only by the application and analysis of another individual human mind. So far nobody has succeeded in endowing even the cleverest of machines or of robots with anything anywhere approaching the human mind. As in the ages past the psyche would seem to evade the machinist's union.

However there is no begging the question that some sort of bargain must be struck between modern economics, modern medical practice and modern deficiencies and efficieneies. State medicine, state politics, state taxation, or state statutes are not the panacea. Modern magic is merely good hard work and virile attaeks on vital problems, not clever evasions. What state medicine means to the welfare of the individual as well as to community health and to the practice of medicine is an urgent issue to which the individual physician as well as organized medicine must give able consideration. Every man who is honest with himself and with the obligations of his profession realizes if he stops to think that there threatens a most unfortunate parting of the ways with a chasm that can never be rebridged unless the medical profession itself takes a hand in the situation.

No less a man than Dr. J. Whitridge Williams, Dean of Johns Hopkins Medical School, remarks "that the time has come when a halt will have to be called on many members of the medical profession who charge all the traffic will bear, may be accepted as evidence of the fact that at bottom the instances of which he complains are but sporadic attempts on the part of medical men to equalize their charges with costs so as to provide a decent return."

Though undoubtedly an honest canvass of the medical profession would show that the per capita wealth is less than in any similar walk of life, yet of course the fraternity is not absolutely free from men whose creed is "Get the cash."

To protect the profession against inner as well as outer destruction the best weapon now at hand would seem to be organization of the profession in an organization that will stick. Here is the elemental angle of failure to progress in line with tendencies of the times, where the medical profession is concerned, except with the great specialists and laboratory men. Business organizations have become just what the phrase implies. A business man knows to a penny what every item he has for sale costs to secure or to produce. The private practitioner is without such knowledge to protect himself when it comes to a sale of his skill and art. The great laboratory, or other institutional adjunct of modern medical practice, is better equipped in this regard. But—after these have charged off their overhead they too, in the greater number of instances are in a position to prove that they too are of that class that fail to deem "the laborer is worthy of his hire." Actual figures show that many of the "big men" actually earn less than mere executives in much less skilled work, as an evidence of the lay idea of the situation. Under date of July 16, 1930, the *Saturday Evening Post* made this comment upon the medical economie crisis:

"It is unfortunately true that occasionally a medical or surgical man in a large city, together with the laboratory men and specialists who assist him in making his diagnoses, charges whatever he dares; but it should be taken into account that the great majority of family

physicians regard such men with contempt and do everything in their power to prevent guileless patients who appraise the skill of service solely by its cost, from falling into the clutches of these dollar doctors.

"No action charging rapacity can lie against the great mass of family practitioners. As a rule they are overworked and underpaid, and in most cases they would be far richer men if their fees were in closer accord with the services they render.

"For many years the overhead costs of medical service have been steadily rising. The patient pays more and gets more. The whole tendency of modern medicine is to lean more and more heavily upon collateral sciences, and to invoke their aid in substituting moral certainties for the exercise of unassisted judgment, which though frequently highly skilled, was often unsatisfactory. The common use of the x-ray is the best known illustration of this tendency, though dozens of others might be named.

"Most physicians are quite ready to acknowledge that they charge their rich patients more than their poor ones. It is stated on high medical authority that the wealthiest fifth of the average community indirectly pays most of the doctors' bills of the poorest two-fifths. Persons in the intermediate layer pay just about what they should. Until the practice of medicine is taken over by the state there are only two other methods that can be employed: First, to charge neither rich nor poor more than a nominal fee; and second, to serve only the rich and well-to-do and let the poor shift for themselves. The former course is closed to the doctors by the first law of nature; the second by the dictates of humanity."

From a medical viewpoint it is perhaps best to quote here a contemporary's comment upon the statements of the *Post*—

" 'Until the practice of medicine is taken over by the state there are only two other methods that can be employed,' and neither is practical or possible. Is it possible that the trend toward specialism, whose high purpose is to 'substitute moral certainties for the exercise of unassisted judgment,' would disappear under state medicine, or that those economic laws which admittedly are forcing the medical practitioner to specialize would become one whit more benign under governmental operation? Would capital invested in plant, laboratory, and library be any the less entitled to earn a reasonable return under state medicine than under private ownership? Would professional skill be less costly or less valuable if compensated by taxation?"

Or, in other words is medicine going to continue to be medicine and the master human science, or is it so commercialized into an adjunct of the chain system of the "five and ten?"

If organized medicine doesn't speak up soon, organized politics will be found to have already "spoken up" in its stead.

THE EDUCATIONAL COMMITTEE RADIO PROGRAM COSTS NOTHING TO THE STATE SOCIETY.

A few misinformed doctors had the impression that both the Chicago and the Illinois State Medical Societies are spending huge sums of money in radio propaganda. Nothing could be farther from the truth. For the efficient radio programs not one cent has been paid to the owners of radio stations, or to speakers or to members of the Educational Committee, even though the radio is a very definite part of the general educational program that has been sponsored by the Illinois State Medical Society for at least eight years, and with remarkable results.

Radio stations are required to devote a certain amount of time to educational programs so that they maintain standing with the Federal Radio Commission. The Educational Committee of the Illinois State Medical Society has sponsored a total of *Ninety-Four Hours* or 561 health educational talks during the past twelve months as a part of the educational programs of radio stations WGN, WJJD, WAAF, and KYW.

These health talks have conformed with the high ethical standards of the medical profession. All the papers have been written and broadcast by members of the Chicago Medical Society. Members of the Educational Committee have served for years without any compensation and at a real personal sacrifice in attending meetings and in censoring all material before it is sent out for publication or given over the air; have also read and approved thousands of these radio talks.

During this entire eight year period there has not been a single protest from a medical society—city, county or state, or from an individual, as to the ethical character of these radio programs. There have been hundreds of letters of commendation from medical men and from the laity throughout the Middle West. Here is direct evidence that these health educational talks over the radio are satisfactory, answering a very definite need in keeping with the times and as such a genuine beneficence.

JUDGE MILLER OF BENTON IS A CANDIDATE FOR SUPREME COURT BENCH.

The policy of this Journal is against active participation in politics, yet we deem it our duty from time to time to call the attention of the medical profession to candidates who are friendly or unfriendly to organized medicine. Especially is this important when such candidates' election to office may have a profound influence on the medical profession in this state. And especially does it need to be done when medicine sees one of its best friends up for office.

In this connection we wish the southern Illinois physicians and their friends to note the candidacy of Judge Charles H. Miller of Benton, who has been nominated for Supreme Judge in the first Supreme District in Illinois. The election will occur Monday, June 5, and Judge Miller deserves your votes.

For years we have contended that no one should practice medicine in this State until he or she has first met all the requirements as provided by law. Illinois laws require a certain standard of preliminary education; graduation from an approved medical school, and internship in a standard hospital, followed by passing an examination and being licensed by the Department of Registration and Education, as an ethical medical precaution.

Disregarding this law, laymen who have never attempted to meet any of these legal requirements are organizing corporations and clinics, throwing medical ethics to the wind, and are actively engaging in the practice of medicine. Recently quo warranto proceedings were filed against one of these organizations in Cook County. Judge Charles H. Miller of Benton was called to hear this case in the Superior Court in the place of Judge Frankhouser who was ill. And Judge Miller proved himself the friend of both ethics and the law.

After hearing the evidence, reviewing the law and previous Supreme Court decisions, wherein similar questions had been involved, Judge Miller rendered a decision in keeping with the contention of medical organizations, i.e.—that corporations composed of lay persons have no legal right to practice medicine in Illinois.

Yet to such presumptious laymen Judge Miller's findings has not been accepted as final. This case has been appealed to the Supreme Court.

It is highly important that the medical profession in southern Illinois and their friends use every effort to elevate Judge Miller to the Supreme Bench on June 5. With Judge Miller a member of the Supreme Bench the medical profession can rest assured that they will have at least one friend in court.

Nor is this case an isolated instance. With the laity increasing its endeavors to assume dictatorship of the practice of medicine in Illinois hundreds of similar cases may soon crowd the dockets. Economically ethical medicine has long been fighting for mere existence. It has now come to approximately the same crisis from a legal standpoint.

IT'S A LONG DISTANCE

The phone bell rang at 6:30 p. m. while mother and the children were eating dinner. The colored maid answered the phone call.

Maid: Hello.

Voice: It's a long distance call from Washington.

Maid (agreeing): Yes'm, it is.

The maid hung up the telephone receiver and walked away.

The phone bell rang again.

The maid returned, put the receiver to her ear and spoke.

Maid: Hello.

Voice: It's a long distance call from Washington.

Maid (again assents): Yes'm, it is.

The maid hung up the receiver again.

The woman of the house was quite mystified by the peculiar conversation, hearing only what the maid said, and at the next ringing she answered the phone. It was a long distance call from Washington by her husband.

THE EIGHTY-THIRD ANNUAL MEETING

The Official Program for the 1933 Annual Meeting of the Illinois State Medical Society is printed in this issue of The Journal. Every member of the Society should read this program carefully and note the unusually good program that has been arranged for each of the five scientific sections. The general Opening Meeting will be held at 1:00 P.M., Tuesday Afternoon, May 16, and this will be a short session, followed immediately by the Oration in Medicine, which will be given by Dr. Chas. B. Wright, Associate Professor of Medicine at the University of Minnesota Medical School, Minneapolis.

The Section meetings will begin immediately after the Oration in Medicine is concluded.

The Secretaries' Conference will be held at 10:00 A.M. Tuesday, and the officers of the Conference have arranged an excellent program which should be of interest to all members in attendance at the meeting.

All Sections will be in session Wednesday morning until 11:00, when the Oration in Surgery will be given by Dr. Harry S. Crossen, Professor of Clinical Gynecology, Washington University Medical School, St. Louis.

The President's Address will be given at 1:30 Wednesday Afternoon, following which, all sections will meet separately.

On Thursday Morning, the five scientific sections will meet in Joint Sessions, with a program which will be of interest to all present, regardless of their professional inclinations.

The House of Delegates will hold its first meeting on Tuesday Afternoon at 3:00, and the second meeting will be held on Thursday morning at 8:30. Every County Medical Society is entitled to representation in this Legislative Body, and should see to it that their elected delegate or his alternate actually attends the sessions.

The President's Dinner will be held Wednesday evening in the Ball Room of the Pere Marquette Hotel, and the entire evening is given over to honoring our President, Dr. Neal. Following the dinner, the President's Dance will be given, and the music will be furnished by a popular Radio Broadcasting Orchestra. Cards, if preferred, are arranged for, with suitable prizes to winners.

The Veterans' Dinner will be held on Tuesday evening, and an excellent program has been arranged with two speakers, Dr. Chas. B. Wright, of Minneapolis, and Dr. F. O. Fredrickson, of Chicago, who will talk on subjects which will be of general interest to all.

The Annual Dinner of the Section on Eye, Ear, Nose and Throat, and the Alumni and Fraternity Dinners will also be held on Tuesday evening.

Although there are not so many commercial exhibits as usual for this meeting, there will be many scientific exhibits which will be of unusual interest. Among these, is a daily demonstration of fresh pathologic tissue under the supervision of Dr. Milton Bohrod, of Peoria. The exact time of these demonstrations will be announced on the Bulletin Boards. More information concerning scientific exhibits will be found listed, with additional comments, in the program.

The Peoria Medical Society will be the host at a Stag Entertainment for men, in the Ball Room of the Pere Marquette Hotel, on Tuesday evening at 9:00 o'clock. All male members and guests are cordially invited to attend this interesting recreational diversion. Appropriate entertainment for the ladies is also arranged during this period.

The Woman's Auxiliary and all visiting ladies will be well cared for, with various meetings and functions, as well as drives,which have been arranged for them.

Every member of the Illinois State Medical Society should be interested in their own meeting, and arrange to meet their friends in Peoria on May 16, 17 and 18, 1933.

THE CITY OF PEORIA

Histories record the earliest settling of whites in the Illinois Country near the site of Peoria, as early as 1660, although 1680 is generally accepted as the date of the visit of those pioneer explorers, Marquette, LaSalle, Joliet, and others, and of the building of Fort Creve Coeur at the foot of Peoria Lake. This was probably the first strueture built by white men in what is now Illinois. Peoria is named after the Indian Tribe of that name who were said to be unusually kind, and having good manners, and it was established as a trading post on the Illinois River as early as 1700.

The present city of Peoria was organized in 1813, was incorporated as a village in 1826, as

a town in 1835, and reincorporated as a city in 1891. Peoria enjoys the distinction of being a metropolitan small city, with a population in 1930, of 104,969. Its accessibility to both Chicago and St. Louis has been a force in the development of Peoria as a manufacturing city, as known throughout the country. The Illinois River flowing past its door, and with the present development of the waterways, Peoria is destined to become an important port for commerce between the Great Lakes and the South, and on to the ocean.

Peoria has the unusual distinction of having thirteen steam railroads, and one large electric line system bringing many passenger trains, and hundreds of freight trains to this city each day. Formerly Peoria was known as one of the leading distillery cities of the world, and since the adoption of the 18th amendment, which necessitated a change in their manufacturing industries, we find many and varied industries taking their place.

During the World War, Peoria became the center of the tractor industry of the world, as the famous caterpillar tractor was developed in this city. Capital invested in Peoria industries is over $125,000,000.00 and the value of the city's production output is approximately $200,000,000 each year. In addition to the thousands of tractors which leave Peoria annually, other agricultural implements, groceries, drugs, commercial solvents, paper, electrical supplies, garden and dairy products, grain and feeds, are among the chief industries.

Peoria is a city of beautiful homes, fine churches, and schools, both for general and higher education. Sixty-five per cent of the citizens own their own homes. The park system comprises 1552 acres, with three municipal golf courses, and three country clubs. Fourteen hotels boast of being able to care for 8,500 people.

Many conventions, state, national and even international, are arranged for Peoria, and it has become one of the leading convention cities of the Middle West. An unusually capable executive and clerical force maintained by the Association of Commerce is ever anxious and willing to aid in assuring the success of all meetings scheduled to be held in their city.

Peoria is once more anxious to demonstrate to the members of the Illinois State Medical Society its ability to act as the perfect host, and all of the many organizations in the city unite in extending their welcome and best wishes for a highly successful meeting.

THE HOST SOCIETY

It is indeed fitting that Peoria is selected for the 1933 Annual Meeting of the Illinois State Medical Society, for in Peoria, the largest attendance has been registered previously of any of the downstate meetings of the Society.

Peoria is centrally situated and readily accessible from all parts of the state by rail, air, or by automobile. The General Committee on Arrangements and its Chairman, C. G. Farnum, have worked faithfully for months to make every possible arrangement to improve the meeting.

Every member of the Peoria Medical Society is a committee of one to give any information that you, the members and guests, desire. These members wear a *"Reception Committee"* badge which will designate them as members of this Committee, and you can ask them whatever you desire to know, and get the information.

The Ladies' Entertainment Committeee has arranged an excellent program for the lady guests, and it is hoped that all of them will take advantage of these arrangements for their entertainment and welfare while in Peoria. The Mayor of Peoria, the Chief of Police, the Chamber of Commerce and other organizations have assured the Society that everything possible will be done to make them realize that they are welcome, as Peoria's guests.

Four of the five scientific sections, all exhibits and general meetings will be held in the Pere Marquette Hotel, while the Section on Public Health and Hygiene will meet just a few doors away, which makes an unusual arrangement.

The Secretaries' Conference will be held at 10:00 A.M. Tuesday, May 16, and it is hoped that all Component Society Secretaries, their Presidents, and prospective officers of all Societies, as well as a representative group of the members present at the meeting, will attend this important conference. The complete program of the conference is contained in this program.

The President's Dinner, the Veterans' Dinner, Alumni and Fraternity Dinners, and other functions will be held in the Pere Marquette

Hotel, and these functions should be well attended. Wednesday evening is quite appropriately set aside to honor our President, and he is most deserving, and the membership should appreciate his past as well as present efforts, in honoring him on Wednesday evening, at 6:30.

The Peoria Medical Society welcomes you to Peoria, and it is their unanimous desire that this meeting of 1933 will be long remembered as one of the outstanding meetings of all times, even though arranged during a period of economic stress.

PEORIA WELCOMES YOU
HOTEL ACCOMMODATIONS

Peoria has adequate hotel facilities for accommodating all who will attend the 1933 Annual Meeting. If you have not already made your hotel reservation, please do so at once, addressing Dr. W. A. Malcolm, Chairman, Hotel Committee, Peoria, Illinois. For those who fail to make the reservation before going to Peoria, arrangements have been made whereby they may be cared for at the Registration and Information desk, at the Pere Marquette Hotel. It is the desire of the Peoria Medical Society and its Committee on Arrangements that everyone attending the meeting will have hotel accommodations to their liking, and every possible cooperation will be extended to all visitors. All members of the Peoria Medical Society are members of the *Reception Committee*, and will have badges which will designate them in this capacity. Ask any of them, when information is desired.

REDUCED RAILROAD RATES FOR ANNUAL MEETING

The Central and Western Passenger Associations have granted a reduced railroad rate for the members of the Illinois State Medical Society and their families, who are going to Peoria by the railroad as a mode of transportation. This is granted on the Certificate Plan, and it is necessary that everyone traveling to Peoria by train should ask for a Convention Certificate, which should show the date, destination, and amount paid for one way ticket to Peoria.

When 100 certificates are deposited at Registration Headquarters in Peoria, they will be validated by an official representing the railroads, and the Secretary of the Society, and they will then entitle the holder to one-half fare for the return trip. It is necessary that the certificates are deposited at Headquarters, as soon as the holder arrives at the meeting. All certificates must show Peoria as the destination, and they must have the name of the holder written in, before they are deposited.

Many times in recent years, a sufficient number of members and their families have traveled by rail to the meeting, but have failed to leave their Convention Certificates to enable the reduced return rate to take effect, and it is hoped that everyone going to Peoria will keep this in mind this year, so the return rate of one-half of the regular fare, will be granted.

Do not forget to ask for a Convention Certificate when purchasing a one way ticket to Peoria, then do not fail to leave the Certificate at Registration Headquarters as soon as possible after reaching Peoria.

WHEN BANKING OR MEDICINE BECOMES TOO HIGHLY ORGANIZED, TOO BIG, IT NEGLECTS THE INDIVIDUAL AND HIS PROBLEMS

If one were to make a survey of calm opinion as to the underlying cause of our present banking debacle, the prevailing thought would be that financial institutions had grown too big and had thereby lost contact with those whom they were designed to serve. In short, banking had become a big business instead of a profession.

Henry Ford is quoted as saying that "banking (to the old type of banker) was a profession like medicine is to a doctor." That type of banking and medicine are parallel in many respects. Both depend for their success on an intimate knowledge of the individual with whom they deal. Both build respect and gain favor through service rendered to the community. Both must adhere rigidly to a code of ethics if they are to maintain the trust that is placed in them. Each of the two lines of endeavor is a profession in the true sense of the word and those engaged in their practice, from the highest to the lowest, must be properly minded, adequately trained and seasoned, and thoroughly imbued with the seriousness of the responsibilities they assume.

Looked at in this light, it becomes at once obvious that when either banking or medicine becomes too highly organized, too big, it neglects the individual and his problems, and generally forsakes its obligations to the community. As either develops into "big business," it forgets that there is such a thing as ethics and adopts tactics which in lush times are considered smart and in hard times highly questionable.

Wayne County Bulletin.

ILLINOIS STATE MEDICAL SOCIETY
EIGHTY-THIRD ANNUAL MEETING
PEORIA, ILLINOIS
MAY 16, 17, 18, 1933

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ILLINOIS MEDICAL JOURNAL

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R. L. Green...1933	E. P. Coleman 1933
C. S. Skaggs...1933	E. H. Weld...1933
Mather Pfeiffenberger 1933	Andy Hall ...1933
C. E. Humiston 1933	I. F. Cutter...1933
*J. W. Van-Derslice 1933	F. L. Brown...1933
C. J. Whalen..1934	M. I. Kaplan..1934
Wm. D. Chapman 1934	C. S. Nelson...1934
J. J. Pflock....1934	N. S. Davis III 1934
G. Henry Mundt 1934	C. B. Reed....1934
G. C. Otrich...1934	

*Deceased

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THE STAG

The Peoria Medical Society will be host to the members and guests attending the Meeting, on Tuesday Evening, in the Ball Room of the Pere Marquette Hotel. This promises to be different from past "Stag" entertainments, and will be entirely to the liking of all. Although "for men only," there will be nothing presented during the evening which will offend anyone present.

THE PRESIDENT'S DINNER

The Annual Dinner honoring the President of the Illinois State Medical Society will be held in the Ball Room of the Pere Marquette Hotel, on Wednesday Evening, May 17, beginning at 6:30 o'clock. This will be strictly a recreational session with no speeches. All living Past Presidents of the Society will be special guests of the Society, and the immediate Past

President, R. R. Ferguson, will act in the capacity of Toast Master.

Immediately following the Dinner, the President's Dance will be given in the Ball Room, and music will be furnished by the well known W.M.B.D. Radio Broadcasting Orchestra. Those who prefer to do so, may play Bridge, and suitable prizes will be awarded to the winners.

Tickets for the President's Dinner may be procured at the Registration Desk, or from the members of the Committee who will make themselves known during the meeting.

It is hoped that every member and guest at the meeting will do their part in honoring Dr. John R. Neal, President of the Society, by purchasing tickets and also attending this interesting Wednesday Evening Session.

VETERANS' SERVICE COMMITTEE DINNER

The Annual Dinner and Meeting of the Veterans' Service Committee will be held at the Pere Marquette Hotel on Tuesday Evening, May 16th, 1933, at 6:00 o'clock. Tickets for the Dinner at $1.00 each, will be on sale at the Registration and Information desk, or they can be procured from members of the Committee during the day. It is hoped that all Medical Veterans of the World War, or of other wars, will attend this Dinner. All advisory members of the Committee from the County Medical Societies, are urged to attend the Dinner, as well as any other members of the Society. There will be two speakers following the Dinner.

1.—"The Medical Societies' Attitude Toward the Veteran." Chas B. Wright, Chairman, Legislative Committee of the American Medical Association, Minneapolis.

2.—"The Veterans' Organizations and the Medical Profession." F. O. Fredrickson, Chicago.

WOMAN'S AUXILIARY AND ALL VISITING LADIES

Registration.....Pere Marquette Hotel
Auxiliary Business Meetings
.....Palm Room, Jefferson Hotel

Tuesday, May 16, 1933

9:30—Meeting of the House of Delegates (House of Delegates to comprise entire State Board of Directors and the County Delegates).

10:30—Auxiliary Business Meeting, Palm Room, Jefferson Hotel. All convention women are cordially invited.

1. Address of welcome, Mrs. Hugh E. Cooper, Peoria.

2. Response, Mrs. John R. Neal, Springfield.

1:00—Opening Meeting of the Illinois State Medical Society, Ball Room, Pere Marquette Hotel. (All women invited).

3:00—Complimentary Tea, residence of Mrs. George Michell, Grand View Drive.

7:00—Dinner and Bridge, for all visiting ladies, University Club.

Wednesday, May 17, 1933

9:30—Auxiliary Business Meeting, Palm Room, Jefferson Hotel. All visiting ladies cordially invited.

12:30—Luncheon for all visiting ladies, Pere Marquette Hotel.

1:30—President's Address, Pere Marquette Hotel Ball Room. John R. Neal, President, Illinois State Medical Society, Springfield.

(All ladies invited).

3:00—Meeting of County Auxiliary Presidents, with new State Auxiliary President, Mrs. Solomon Jones, Danville.

6:30—President's Dinner, followed by dance or cards, Ball Room, Pere Marquette Hotel.

Thursday, May 18, 1933

9:00—Post-Convention Board Meeting.

All Auxiliary Business Meetings will convene promptly at the appointed time.

SECRETARIES' CONFERENCE

T. D. Doan, *President*.....Palmyra
H. A. Felts, *Vice-President*.....Marion
Elizabeth R. Miner, *Secretary*.....Macomb

Tuesday Morning, May 16, 1933

10:00—12:00.

10:00—"The Care of the Indigent." R. K. Packard, Chicago. Discussion opened by Harold M. Camp, Monmouth.

10:30—"Discussion of Some of the Phases of Contract Practice." Olin West, Secretary and General Manager, American Medical Association, Chicago. Discussion opened by E. P. Coleman, Canton.

11:00—"Some of the Obstetrical Problems of the Country Doctor." E. E. Davis, Avon. Discussion opened by Louis N. Tate, Galesburg.

11:30—"Medical Leadership Among Lay Groups." Lena K. Sadler, Chicago.

11:55—Annual Election of Secretaries' Conference.

Meetings of the House of Delegates

Tuesday Afternoon, May 16, 1933

3:00 P. M.—First meeting of the House of Delegates called to order by the President, John R. Neal, for reports of Officers, Members of the Council, Chairmen of Committees, introduction of resolutions, and for other business that may come before The House.

Thursday Morning, May 18, 1933

8:30 A. M.—Second meeting of the House of Delegates called to order by the President for the election of officers, councilors, committees, and delegates to the American Medical Association.

Reports of Resolutions Committee and necessary action on resolutions, and for the transaction of other business that may come before The House.

At the close of the second meeting of the House of Delegates, the President-Elect, Philip H. Kreuscher, will be inducted into the office of President, by the retiring President.

By special invitation, Rev. A. M. Schwitalla, Dean, St. Louis University School of Medicine, St. Louis, will address the House of Delegates at the first meeting on Tuesday Afternoon, May 16, on the Reports of the Committee on the Costs of Medical Care. Father Schwitalla was a signer of the minority report of the Committee, and it is quite probable that no one in the Country is more familiar with these reports than he. All members of the Society who care to do so, may hear this presentation and full details as to the exact time of the discussion will be announced on the bulletin boards.

General Sessions

Tuesday Afternoon, May 16, 1933

Ball Room—Pere Marquette Hotel

1:00—Eighty-Third Annual Meeting of the Illinois State Medical Society officially opened by the President, Dr. John R. Neal, Springfield.

1. Invocation—Rev. M. D. Sammon, Pastor St. Bernard's Catholic Church, Peoria.

2. Address of Welcome—Hon. Charles L. O'Brien, Mayor of Peoria.

3. Address of Welcome—Hugh E. Cooper, President, Peoria Medical Society.

4. Report of Chairman, Committee on Arrangements—C. G. Farnum, Peoria.

5. Announcements, and adjournment for Oration in Medicine.

1:30—Oration in Medicine. "The Effect of Increasing Life Expectancy on the Practice of Medicine." Chas. B. Wright, Associate Professor of Medicine, University of Minnesota Medical School, Minneapolis. (By Invitation).

Wednesday Morning, May 17, 1933

11:00—"Oration in Surgery." "The Surgeon's Duty in Cancer of the Cervix Uteri." Harry M. Crossen, Professor of Clinical Gynecology, Washington University Medical School, St. Louis.

Wednesday Afternoon, May 17, 1933

1:30—"President's Address." John R. Neal, President, Illinois State Medical Society, Springfield.

Thursday Morning, May 18, 1933

The President-elect, Philip H. Kreuscher, will be inducted into the office of President of the Illinois State Medical Society, by the retiring President, immediately after the adjournment of the second meeting of the House of Delegates.

All members and guests are cordially invited to attend this interesting ceremony.

Section Programs

section on medicine

Walter H. Nadler.....*Chairman*
R. F. Herndon.....*Secretary*

Tuesday Afternoon, May 16, 1933

3:00—"Mediastinal Tumor With Report of a Case." W. H. Newcomb, Jacksonville.

Diagnostic accuracy is important for treatment and prognosis. The chief symptoms are the result of pressure on adjacent structures. Differentiation must be made from tuberculosis, bronchiectasis, asthma and heart disease. Report of a case, with autopsy findings.

Discussion opened by Herman Cole, Springfield.

3:20—"The Use of Alcohol in Medicine." Clarence Fischer, Peoria.

Alcohol, by virtue of its solubility in lipoids, acts not only on nervous tissue but also on the motor and secretory apparatus of the gastrointestinal canal, the metabolism, and the circulation. The respiratory and vasomotor centers are stimulated by small doses and the blood pressure is raised. Alcohol has a paralyzing effect on the heat-regulating centers, for it lowers the body temperature. The comforting effect of alcohol may be useful in febrile diseases; appetite is improved and the secretion of the stomach and intestines is increased. It can be used to advantage in the treatment of diabetes because of its ready combustion and high caloric content. Accordingly alcohol is, under certain circumstances and under certain indications, to be employed as a therapeutic measure. There can be no doubt that the abuses of alcohol result from its narcotic effect on the central

nervous system. The results of acute intoxication and the use of alcohol in excess over long periods may give rise to effects in the central nervous system which are permanent, such as delirium tremens and the forms of toxic and polyneuritic psychosis. The constitutionally inferior are extraordinarily susceptible.

Discussion opened by Cecil M. Jack, Decatur.

Symposium on Arthritis

3:40—"Diagnosis of Non-Specific Chronic Arthritis." Douglas Boyd, Highland Park.

The subject is discussed from the standpoint of classification as infectious arthritis with a special atrophic type, and hypertrophic arthritis. Diagnosis depends largely on a good history, a careful physical examination, and clearly defined x-ray films. Physical examination should include all joints and all of the important possible foci of infection. It should be generally appreciated that an active joint may also act as a focus. The x-ray is often invaluable in defining the extent of joint damage and may save much unreasonable treatment. Routine extensive laboratory work is unnecessary and wasteful; blood chemistry is of value where gout is in question. Basal metabolism has been determined in 150 patients in this study and no significant variation from normal found. We have found certain clinical conditions confusing and list them in order of their frequency in our clinic. A brief discussion of each will be given. (Lantern slides).

3:55—"General Treatment of Chronic Arthritis." A. J. Arlon, Chicago.

Treatment of the chronic (non-tuberculous) arthritides is discussed under three headings: 1) Infectious Arthritis, 2) Atrophic Arthritis, 3) Hypertrophic Arthritis; (Goldthwaite classification). Under the infectious group point is made of the fact that the arthritis should be treated first and then, upon lessening of the symptoms, foci are cautiously removed. Some of the common foci are discussed; 70 to 80 per cent are above the neck. In the atrophic group the most resistant types are found. General measures to build up are necessary; there is no specific treatment. Use of vaccines, analgesics and physiotherapy is recommended. In the hypertrophic type general measures—raising the rate of metabolism, etc. —are discussed.

4:10—"Diathermic Hyperpyrexia in the Treatment of Arthritis: Report of 123 Treatments." D. E. Markson and Mr. S. L. Osborne, Chicago.

This subject will be discussed under the following headings: 1) Rationale of the method as applied to selected cases of infectious arthritis; 2) Selection of cases with clinical reports thereof; 3) Technique of treatment in detail; 4) Reactions occurring during treatment with special studies carried out on patients—immunologic, blood chemistry, capillary microscopy—sedimentation rates, etc.; 5) Clinical results of 123 treatments given to 19 different patients; 6) Conclusions. (Lantern Slides).

4:25—"A Comparison of Methods of Producing Hyperpyrexia by Various Physical Agents; Demonstration of a Simple Method." J. R. Merrimen, Evanston.

Five different methods and combinations of these methods of raising body temperature are contrasted with special reference to the comfort and other reactions of the patients, together with indications and contra-indications for the use of different methods in different cases. A simple method of raising body temperature by a baker will be demonstrated.

Discussion opened by Fremont Chandler, Mr. S. L. Osborne, and Frank Coulter, Chicago.

4:55—"Indications for Lung Compression in Tuberculosis based on a Pathological Clinical Classification." Benjamin Goldberg, Chicago.

The paper deals with a classification of pulmonary tuberculosis from a pathological and clinical standpoint and simplifies the selection of cases for lung compression. This is accomplished through a better appreciation of the clinical progress in different pathologic types, so that once these types are recognized, there will be definite indications for certain procedures rather than the vague recommendations that exist at this time.

Discussion opened by Carl A. Hedblom, Chicago.

5:15—"Multiple Myeloma with Case Report." George B. Stericker, Springfield.

Multiple myeloma is a rare and fatal disease of the bone marrow. Its clinical characteristics are: 1) pain which at first is shifting, variable, and often leads to early mistakes in diagnosis; 2) multiple involvement of the spine, sternum, ribs and other bones; 3) nephrosis and the excretion of Bence-Jones bodies in the urine; 4) anemia. It constitutes three-tenths of one per cent of all malignant disease. Cases have been reported among all races and from all parts of the world. Men are much more frequently attacked than women. The case reported presented most of the classical signs. Correct diagnosis was not made until after extensive x-ray study. The course of the disease was unusually rapid. (Lantern slides).

Discussion opened by Harold Swanberg, Quincy.

Wednesday Morning, May 17, 1933

8:30—"The Use of Amorphous Phosphorous in the Treatment of General Paresis." Sidney D. Wilgus and Ralph H. Kuhns, Mr. DeLester Sackett and Miss Phillis Quittman, Elgin.

Four groups of five patients each were chosen for this study of the action of amorphous phosphorus. The physical, neurological and mental states before and after treatment were carefully studied. The blood and spinal fluids were examined serologically and chemically, and blood counts were taken before and after treatment. Correlation between laboratory results and clinical findings is given.

8:50—"The Technic in the Administration of Various Agents for Production of Hyperpyrexia in the Treatment of General Paralysis

of the Insane." (Motion Picture Demonstration). Alexander J. Azar, Elgin.

A motion picture showing the technic, equipment and paraphernalia necessary in the production of hyperpyrexia by the following methods; Typhoid vaccine, ratbite fever, malaria, sulphur-in-oil, diathermy, electric blanket, radiothermy, hot air, and hot water. Each method is reviewed in detail, giving a working knowledge of the various therapeutic agents. It is the purpose of this picture to present the technic for the administration of the above named methods, not going into detail concerning the selection of material or the comparison of results.

Discussion opened by Clarence A. Neymann, Chicago, and Ralph Kuhns, Elgin.

9:10—"The Use of Sodium Amytal in Myoclonic Encephalitis." F. Garm Norbury, Jacksonville.

Various types of encephalitis. Pathological localization of the lesions in the subcortical areas. Myoclonic movements arising from subcortical areas. Effect of sodium amytal and apparent localization of its action in these cases.

9:30—"Meningococcus Meningitis; A Clinical Study of 338 Cases." Maxwell P. Borovsky, Chicago.

Three hundred and thirty-eight consecutive cases of meningococcus meningitis are reported with reference to mortality according to age, color, day of illness on admission, clinical picture and type of treatment. The prognostic significance of certain symptoms and complications. Laboratory findings. The reports of reexaminations made months after the patients' discharge from the hospital. (Lantern slides).

Discussion opened by Gerald M. Cline, Bloomington.

9:50—"Primary Hypochromic Anemia." Howard L. Alt, Chicago.

Primary hypochromic anemia is a relatively common condition. There is no clear differentiation between this syndrome and chlorosis. Three factors are commonly associated with the occurrence of primary hypochromic anemia, namely, absence or decrease of hydrochloric acid in the gastric juice, a deficient diet, and an increased stress placed on the individual. The condition responds specifically to iron therapy. Cases are presented to illustrate the above points. (Lantern slides).

Discussion opened by Richard F. Herndon, Springfield.

10:10—"The Diagnosis and Treatment of Anemias of Infancy." Arthur F. Abt, Chicago.

Normal blood values for infants from the newborn period through the first few years are tabulated. Discussion detailing the normal blood picture, classification of the anemias characteristic for the various age groups and diagnosis and treatment, are considered. (Lantern slides).

Discussion opened by W. L. Crawford, Rockford.

10:30—"Urinary Tract Anomalies and Pyuria in Childhood." J. A. Bigler, Highland Park.

The paper deals with the pyurias of a chronic nature associated with urinary tract anomalies, also with the frequency of anomalies and their occurrence without pyuria, sometimes for years at a time. (Lantern slides).

Discussion opened by H. B. Hinkle, Springfield.

Wednesday Afternoon, May 17, 1933

2:30—"Cirrhosis With Hemochromatosis." W. H. Nadler, Chairman, Section on Medicine, Chicago.

An uncommon disease, "bronzed diabetes" is of particular interest from the standpoint of mineral and pigment metabolism. A typical case is presented, that illustrates loss of hepatic glycogen reserve. (Lantern slides).

Discussion opened by Howard L. Alt, Chicago.

2:50—"The Action of Chondroitin and Other Compounds of Glucuronic Acid Especial Reference to Migraine." Lathan A. Crandall, Jr., Assistant Professor of Physiology, Northwestern University Medical School, Chicago.

Chondroitin, which is prepared from cartilage and contains glucuronic acid and galactosamine, is chemically related to the mucoitin that constitutes about two per cent of gastric mucin. Chondroitin appears to be of some benefit in peptic ulcer. Chondroitin has produced freedom from head pain in 50 per cent of migraines and improved another 25 per cent. Its biologic significance will be discussed.

Discussion opened by Lowell D. Snorf, Chicago.

Symposium on Heart Disease

3:10—"Classification of Heart Disease." N. S. Davis, III, Chicago.

For the more effective study of diseases of the heart and particularly for the improvement of vital statistics, it is necessary that we have a uniformity of nomenclature and uniform criteria for using the nomenclature. Such nomenclature should, as far as possible, be descriptive and descriptive only of the conditions which they indicate. The criteria should be precise definitions of the states named in the nomenclature. The classification of heart disease of the American Heart Association satisfies these requirements and should be universally adopted. (Lantern slides).

3:25—"Acute Infectious Myocarditis." J. A. Walsh and James G. Carr, Evanston.

Interest in the morphologic alterations of the heart muscle which result from the acute infections is not of recent origin. The original observations were concerned with the form, color and consistence of the heart muscle. Virchow described the degenerative changes of the heart muscle during typhoid. Romberg in 1890 first

demonstrated fully the frequency of acute interstitial myocarditis in typhoid, scarlet-fever, and diphtheria. Numerous observers have described the myocardial changes attendant upon acute general infections. In recent years the electrocardiograph has further confirmed the presence of such changes. Based upon the clinical and electrocardiographic findings, we are presenting a series of cases following minor infections in which the acute myocardial change appeared to be the only residual site of infection. The paper presents "acute infectious myocarditis" as a clinical entity. The clinical picture is reviewed and electrocardiographic evidence of acute myocardial change is afforded. The importance of the recognition of these cases and of the institution of proper treatment is emphasized. (Lantern slides).

3:40—"Coronary Artery Sclerosis." Don C. Sutton, Chicago.

The effects of ischemia are: 1) Pain—the result of irritation of the sensory nerve endings in ischemia, temporary, (angina pectoris) or prolonged, (myocardial infarction); 2) Pathological changes in the cardiac muscle are cellular degeneration and fibrotic scarring; 3) The compensatory factors are changes in blood pressure, changes in calibre of the coronary vessels and in collateral circulation. A discussion of the effect of drugs upon these compensatory factors. (Lantern slides).

3:55—"Auricular Fibrillation." C. C. Maher, Chicago.

Aricular fibrillation is the most common type of arrhythmia of a serious nature which the practitioner is called upon to manage. This paper includes a simple explanation of the physiological mechanism of the arrhythmia and the causative factors producing it. The relative merits of quinidine and digitalis therapy are evaluated. A method of treatment with quinidine or ambulatory patients will be presented.

4:10—"Treatment of Heart Disease." William A. Brams, Chicago.

The treatment of heart disease is based on an attempt to maintain myocardal function in degree sufficient to meet the patient's requirements. Digitalis is still the sovereign remedy. Care must be used that the dosage is sufficient; common errors in this direction are the administration of drops for minims, the presence of marked edema and amounts actually insufficient to produce the desired result. Mercurial diuretics are of value. Suitable measures for sleep and rest are imporant. Ouabaine in suitable dosage may be indicated for emergency use. Management for ambulatory patients and in pregnancy are also discussed.

4:30—"Present Day Uses of Quinidine." Lewis W. Woodruff, Joliet.

Though quinidine has been used increasingly since its effectiveness was first demonstrated by Frey in 1918, there still exists much confusion and controversy as to its proper application and dangers. Indications for its use include cases of auricular fibrillation of recent onset without congestive failure; those of longer standing with good compensation whom digitalis fails to maintain in comfort; auricular fibrillation in hyperthyroidism following operation; paroxysmal fibrillation; ventricular paroxysmal tachycardia; as a prophylactic against ventricular fibrillation in coronary thrombosis; and in a limited number of cases of extrasystoles and auricular tachycardia. Discussion of its mode of action. (Lantern slides).

Discussion opened by George Parker, Peoria; Warren Pearce, Quincy; and Frank Deneen, Bloomington.

5:00—"Chronic Prostatitis: Its Importance in General Practice." C. H. Boswell, Rockford.

A resume of the anatomy of the prostate gland and its surrounding parts, together with a discussion of chronic prostatic infections, the underlying pathology, symptomatology, diagnosis and treatment. (Lantern slides).

Discussion opened by Harry A. Durkin, Peoria.

5:20—"Adenocarcinoma of the Kidney in Early Childhood." H. T. Mostrom and J. C. West, Batavia.

Pure epithelial growths in childhood are rare. The basis of this paper lies in a tumor removed from a child less than three years of age. The characteristic tumor of the kidney in this age group is the tumor described by Wilms as adenomyosarcoma, or commonly called a mixed tumor of the kidney. The growth to be described does not belong in this classification in that it springs from purely epithelial structures (Lantern slides).

Discussion opened by J. F. Carey, Joliet.

Thursday Morning, May 18, 1933

Joint Meeting with Sections on Surgery, Eye, Ear, Nose and Throat, Public Health and Hygiene, and Radiology.

8:30—12:00.

1.—"Radiologic Evidences of Diseases of the Biliary Tract." James T. Case, Chicago.

2.—"The Value of Combined Cholecystography and Liver Function Tests." Harold Swanberg, Quincy.

The successful therapy of a large percentage of gall bladder disease is surgery. Surgeons are frequently shocked to find their patient dead 24 or 48 hours after a simple cholecystectomy where no trouble was encountered at the time of operation. Such deaths invariably occur in patients with a poor liver function. The liver function can be fairly well determined by the intravenous injection of Iso-Iodeikon,—the same dye that is used for intravenous cholecystography. In making an x-ray examination of the gall bladder, why not use the intravenous method of cholecystography, which will not only enable us to determine the presence or absence of gall bladder pathology, but at the same time ascertain the operability of the patient?

3.—"The Etiology of Ocular Disease." Illustrated by lantern slides. Harry S. Gradle, Chicago.

4.—"Outlook for Public Health." Frank

J. Jirka, Director, State Department of Public Health, Springfield.

Some of the more outstanding achievements in the field of public health are briefly reviewed. Prevailing health conditions at the time of the Columbian Exposition in Chicago in 1893 and at the present time when the Century of Progress is about to open are compared and briefly discussed. Some of the difficulties in the way of extending public health activities are pointed out. The effect of a declining birth rate and of increasingly effective control over communicable diseases and the consequent rise of the age level of the general population on the character of public health activities are discussed. The probable influence of such factors as the tuberculin skin test for the susceptibility for tuberculosis and the ability to impregnate milk with vitamin D are pointed out. Public health problems given prominence through the newer knowledge concerning nutrition and through industrial developments are appraised and the relation of public health departments and practicing physicians are touched upon.

5.—"The Detroit Plan." H. F. Vaughan, Commissioner of Health, Detroit, Michigan. (By Invitation.)

6.—"The Management of Hepatic Diseases." Charles A. Elliott, Chicago.

The liver may be considered a mass of undifferentiated cells constantly changing in unison with physiologic and pathologic processes. Its parenchyma is peculiarly sensitive to toxic substances. A fairly uniform sequence of events ensues; i.e., parenchymatous damage, liver cell regeneration, connective tissue replacement, and the establishment of a compensatory circulation. Restitution to functional integrity may be greatly influenced by appropriate management. (Lantern slides.)

7.—"The Surgical Treatment of Gastric and Duodenal Ulcer." H. M. Richter, Chicago.

Surgical treatment of gastric and duodenal ulcer is often directed toward relieving some local condition that we regard as the cause of the ulcer. Short-circuiting operations and pyloroplasties come under this head. The fact is that we know nothing of the etiology of ulcer. The ulcer may be as far removed from its cause as the gummatous periosteal ulcer from the underlying syphilis. Excision of the ulcer is a poor makeshift. Most ulcers can be more satisfactorily removed by the internist with less risk and about the same incidence of recurrence.

Ulcers occur almost entirely within narrow anatomic limits. This area includes the lesser curvature, antrum, and the first portion of the duodenum. On a clinical basis this may be described as the ulcer-bearing segment or organ. This segment or organ can be removed. With its removal recurrence of the ulcer is so unusual as to raise the question of the adequacy of the operation, that is, as to whether the entire segment was removed. This operation, partial gastrectomy for gastric and duodenal ulcer, has received very wide acceptance abroad but has met with opposition here, except for the work of a comparatively few surgeons. The results are excellent; the mortality that of major abdominal surgery.

Discussion opened by Karl Meyer, Chicago.

SECTION ON SURGERY

Sumner M. Miller.....*Chairman*
George W. Post.....*Secretary*

Tuesday Afternoon, May 16, 1933

3:00—"Rectal Obstruction." H. M. Streicher, Chicago.

Cases of Lymphogranuloma Inguinalae were studied proctoscopically. It is our impression that the underlying process producing rectal obstruction is infectious in origin. Rectal obstruction is a frequent finding only in the terminal stage of the disease. The obstruction is annular-tubular in form. Frei test has been positive in (a) Cases in which no rectal obstruction was present in any type or form. (b) Cases in which rectal obstruction of the annular-tubular type was present. (c) Cases in which rectal obstruction was present but not of the annular-tubular type.

At the present time it is difficult to draw any definite conclusions of correlative value between the rectal syndrome and the lymphadenitis in relation to the Frei test or the primary lesion.

Discussion opened by W. A. Hinckle, Peoria.

3:30—"Surgery of the Thyroid in Children." W. L. Bowen, Peoria.

Physiology—Experiments of Gerdernatsch and Swingle. Biedl's opinion of the endocrines.

Etiology—Heredity. Low iodine content.

Hypothyriodism—Earlier diagnosis and recognition of great benefit.

Diagnosis—Clinical findings, X-ray of epiphysys of bones.

Treatment—Preventive. Metabolism tests of gravid women. Early curative treatment for greatest benefit.

Exophthalmic goiter—Etiology, symptoms, basal metabolism tests.

Treatment—Preventive. Iodine administration. Curative—Surgical. Longer period of preparation.

Discussion opened by John R. Neal, Springfield. Lindon Seed, Chicago.

4:00—"Clinico-pathological and Therapeutic Aspects of Carcinoma of the Thyroid Gland." J. E. Bellas, Peoria.

All previous confusing classifications of thyroid carcinoma have been simplified to consist of three types—scirrhus carcinoma, papilliferous carcinoma and malignant adenoma.

The latter, forming about 95% of all carcinomas, is the most common, and is believed to arise from pre-existing fetal adenomas and to occur in 2.7—8% of all nodular goiters. Malignant transformation occurs within the capsule with rapid spread through the blood vessels, so that distant metastases may be early. Established cases are too late for surgery and radiation is the treatment of choice. A suspicious attitude in all nodular goiters, and systematic serial section study of all operatively removed specimens, will disclose more

cancers in early stages, and "nip in the bud" many that might subsequently become malignant.

Discussion opened by Carl Black, Jacksonville. F. Deneen, Bloomington.

4:30—"Non-surgical treatment of Bladder Neck Obstruction." H. L. Kretschmer, Chicago.

This paper is based on a series of 235 cases. The value of accurate diagnosis will be considered. The preparation is just as important in this group as it is in surgical cases. An analysis is made of the frequency with which co-existing lesions of the heart and arteries, as well as associated genito-urinary pathology is found. The importance of controlling infection before operation, will be discussed. The advantages of this method over surgery will be carefully considered. An analysis of post-operative complications and a discussion of the morbidity and mortality will be given.

Discussion opened by Harry Culver, Chicago.

5:00—"Trans-urethral resection of Bladder Neck Obstruction." B. C. Corbus, Chicago.

The indications are:

1. Hypertrophy of the prostate, and 2. Fibrous median bar. Resection of carinoma of the prostate is only a palliative procedure.

Although it has been recommended for all types of prostatic hypertrophy, in the author's opinion it seems most applicable in

1. Bilateral prostatic hypertrophy.
2. Solitary subcervical lobes, hypertrophy, and
3. Fibrous median bar formation.

Cystoscopy is the only accurate means of determining the type of obstruction.

The most important factors in postoperative care are:

1. Stabilization of blood-pressure.
2. Renal function, as indicated by blood chemistry and excretory tests, and
3. Condition of heart, as indicated by clinical and electro-cardiographic examination.

The transurethral resection is accomplished by the utilization of an especially constructed machine that delivers a high frequency current that seals as it cuts the tissue under water. The McCarthy transurethral resector.

Discussion opened by John S. Nagel, Chicago.

Wednesday Morning, May 17, 1933

8:00—"Peridural Anesthesia in Major Surgery." J. R. Harger, Chicago.

Efficient anesthetic procedures are at our command but without a well trained anesthetist we are greatly handicapped. The extension of the scope of parasacral anesthesia to the use of peridural anesthesia for abdominal and chest work offers tangible possibilities worthy of our serious consideration. The safety of spinal anesthesia has not approached that of regional or local nerve block. Efficient nerve block by the peridural method is obtainable and is all but free from hazard. Further study, improved technique, more effective anesthetic solutions are necessary to establish a standard of values.

Discussion opened by C. B. Brown, Peoria.

9:00—"The Pathological and Biochemical Changes in Paget's Disease." Jerome T. Jerome, Chicago.

This paper details the result of study of eight cases of osteitis deformans which were seen at the University of Chicago Clinics. Comparative studies have been made of biochemical aspect of the disease and conditions with somewhat similar skeletal changes associated with hyperparathyroidism. This has been confined largely to calcium and phosphorus metabolism studies. A comparative study of the gross and microscopic pathology of these conditions has been made, and methods of treatment are discussed.

Discussion opened by Vitto Witting, Champaign. Adolph Hartung, Chicago.

9:30—"New Trends in Cancer Research." J. K. Narat, Chicago.

Malignant cells are characterized by typical properties called kataplasia; loss of ability of morphological and physiological differentiation, autonomous growth, autophagocytosis, transplantability, liquefaction of the culture plasma, short duration of life. The process furnishing energy to tumor cells is not exidation but fermentation. Glycolytic property of tumor cells is enormously increased. Increased concentration of carbon dioxide in the air inhaled by the host may damage tumor cells. Increased partial pressure of oxygen inhibits therapeutic possibilities.

A main factor responsible for effectiveness of surgical procedures in cancer, is the removal of tumor masses which affect the metabolism of the host. Certain points regarding surgical procedures are discussed.

Discussion opened by M. G. Bohrod, Peoria.

10:00—"Complicated Fractures of the Leg and their Treatment." E. B. Montgomery, Quincy.

This paper deals with the use of Hakenbruchs extension apparatus in the adjustment and retention of the bones. This method is distinctly superior to other forms of adjustment and retention for these cases. This applies especially to skeletal traction. The paper is illustrated by lantern slides showing results in one of the severest cases, and showing Modus Operandi of the splint in adjusting deformities, which can be done under fluoroscopic observation. One of the outstanding advantages of the method is that it permits early getting out of bed and going about on crutches, a truly ambulatory method.

Discussion opened by J. H. Bacon, Peoria.

10:30—"The Delivery of the After Coming Head." Bertha Van Hoosen, Chicago.

In breech presentations there is an infant mortality which can be laid to the delivery of the after coming head. Principles on which the technique of the delivery of the after coming head has been based. Maintaining flexion important. Use of Piper forceps. The technique described in this paper is based on the mech-

anism of delivery in the flat pelvis without the production of synclitism. Description of the technique. Advantages to be derived from it. Statistical report of the results of breech delivery, version, extraction and complications.

Discussion opened by W. A. Malcolm, Peoria.

Wednesday Afternoon, May 17, 1933

2:30—"The Treatment of Pulmonary Abscess." Carl L. Hedblom, Chicago.

Pulmonary abscess is of frequent, apparently increasing incidence, it is a serious menace to the patient's health and life and it is largely preventable and curable. The principles of treatment are drainage through a bronchus, or through the chest wall, and obliteration of the abscess cavity, to which pulmonary and chest wall collapse and other treatment may be auxiliary. Occasionally extirpation is necessary. The indications for the various methods and their combinations depend on the pathological anatomy, and on the clinical course. Efficacy of a properly selected treatment is dependent in considerable measure on special methods for avoiding operative and postoperative complications. Results.

Discussion opened by M. Pollak, Peoria. B. H. Goldberg, Chicago.

3:00—"Some of the Essentials in the Diagnosis and Treatment of Urgent Surgery of the Abdomen." E. S. Murphy, Dixon.

1. Urgent lesions of the appendix.
   (a) Acute appendicitis.
   (b) Obstructive.
   (c) Silent, chronic ulcerative appendicitis complicated with perforation.
2. Ulcerative lesions of the digestive tract complicated with perforation.
   (a) Benign.
   (b) Malignant.
3. Embolus or Thrombosis of the Mesentery Artery.
4. Diverticulitis.
5. Intussusception.

The foregoing lesions will be discussed in regard to history, symptoms, course, complications, diagnosis, and treatment.

Discussion opened by W. A. Christenson, Rockford.

The diagnosis of chronic pains, which apparently indicate surgery, should be given a painstaking and thorough examination. New elements which cause abdominal pain from a medical standpoint are now diagnosed by special examination. These conditions in certain types of individuals are more common than has been recognized in the past, and present facts which make an exploratory operation less frequently indicated. The endocrine factor is assuming greater importance as new knowledge is gained.

Discussion opened by J. H. Hutton, Chicago. J. L. Nortell, Chicago.

4:00—"Intestinal Obstruction." W. R. Cubbins, Chicago. Amos Fey, Galesburg.

The principal cause of death in cases of intestinal obstruction has been, and continues to be, avoidable delay. The results of experimental work in relation to the cause of death have been very confusing and have as yet contributed little of value to the treatment of these cases. Early diagnosis and surgical care will be discussed. Illustrations of unusual cases of types of obstruction and methods of bowel suture will be shown.

W. R. Cubbins.

This is a statistical review of cases from the records of the Cook County Hospital occurring from 1922 to 1931. The frequency of the different causes of obstruction is noted. Points in symptomatology relative to enemas, peristalsis and blood counts are emphasized. The mortality variation between simple obstruction and that occurring with gangrene is given. Procedures in relieving obstruction are discussed and mortality given, emphasizing the results of enterostomy, iliostomy, marsupialization, compared with simple relief of obstruction on resection and anastomosis. Statistical information regarding current questions of the cause of death and possibility of organisms passing through the bowel wall is presented.

Amos Fey.

Discussion opened by Everett Coleman, Canton.

5:00—"Carcinoma of the Jejunum." R. A. Kordonat, Chicago.

Carcinoma is frequently found in the jejunum. Theories are reviewed to explain this rarity. Symptoms, in the majority of instances are referable to mechanical occlusion of the small bowel. Early fixed pain, food dyscrasia, weight loss, anemia and constipation are, together with the physical examination, discussed in detail. Blood and stool examinations together with roentgenological findings are important procedures. Two types of carcinoma of the small bowel are quite generally recognized:—(1) the ring type of localized adeno-carcinoma, and (2) Intestinal polyps that undergo malignant degeneration. In treatment, early resection offers the most satisfactory results. When the mass is not removable a side-tracking, lateral anastomosis operation giving good results. The prognosis is poor in most cases.

A case is reported. Conclusions—Carcinoma of the small bowel may be suspected in individuals who have persistent abdominal pain, secondary anemia not relieved by the usual measures, who have symptoms referable to disorders of the gastrointestinal system. Exploratory laparotomy should be done in such instances.

Discussion opened by P. H. Poppen, Princeton.

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Discussion opened by Karl Meyer, Chicago.

SECTION ON EYE, EAR, NOSE AND THROAT

Frank J. Novak, Jr.....*Chairman*
George S. Duntley.....*Secretary*

Tuesday Afternoon, May 16, 1933

3:00—Chairman's Address: "The Immunologic View Point in our Specialty." Frank J. Novak, Jr., Chicago.

3:30—"Physical Therapeutic Aids in Otolaryngology: A Presentation of Clinical Methods by Motion Pictures." A. R. Hollender, Chicago.

Physical aids are now being more generally employed in ear, nose and throat diseases. Results depend largely on the correct technical application of methods. The purpose of this motion picture is to demonstrate some of the physical methods which have been developed after ten years experience.

Discussion opened by C. D. Thomas, Peoria.

4:00—"Intracranial Lesions of Otitic Origin." Samuel J. Meyer, Chicago.

The eye and the ear are so closely related in the fields of neurology, ophthalmology and otology, that it is of the utmost importance that the specialist in these respective fields should realize the significance of this relationship in the diagnosis of intracranial lesions. Frequent eye examinations should be made in all cases of intracranial ear complications in an attempt to ascertain involvement of the second, third, fourth, fifth, sixth and seventh nerves, the intracranial sympathetic nervous system and the venous sinuses.

Discussion opened by R. C. Matheny, Galesburg.

4:30—"The Value of Eradicating Tuberculosis of the Mastoid and Middle Ear." Irving Muskat, Chicago.

Tuberculosis of the mastoid, which is often extensive but unrecognized, adds to the depletion of the recuperative forces of the body from the coexisting lung destruction. This added focus often forces the issue of death.

The eradication of such mastoid disease results in great benefit to the patient. Radical mastoidectomy is performed under local anaesthesia. This procedure therefore gives an added, very important new indication for mastoid surgery in pulmonary tuberculosis, and it behooves physicians to recognize its importance.

Discussion opened by John E. Mulsow, Milwaukee, Wisconsin. (By Invitation.)

5:00—"The Choice of a Cataract Operation for Senile Cataract." With Motion Picture Demonstration. Oscar B. Nugent, Chicago—W. A. Fisher, Chicago.

Complications, during and after cataract operations, are the greatest incumbrances to securing the best end results; therefore, a technic should be selected for the extraction of cataract which promises the fewest complications.

This paper deals with the technic of cataract operation. Parts of this technic is original but most of it has been adopted after personal observation of the work of many of the outstanding men of Asia, Europe and America, and by personal experience with same in our work in India and at home.

New apparatus and instruments are also described with a motion picture demonstration of their proper use during a screen presentation of two cataract extractions, from the right and the left eye.

Discussion opened by G. F. Suker, Chicago.

6:15—7:45. Banquet (Informal) and entertainment.

Wednesday Morning, May 17, 1933

8:30—"The Effect of Aqueous Solutions on the Nasal Ciliated Epithelium." Irving F. Barnett, Chicago.

The effect of various nasal applications on the highly differentiated ciliated epithelium is a question which has been under discussion for many years.

The essayist thinks that the cells are easily destroyed and are particularly affected by the chemicals which the solutions contain, the strength of the solutions, the exposure of the cells after the mucus is removed, and mechanical trauma by force of application.

Discussion opened by A. H. Geiger, Chicago.

9:00—"What is Blindness." A. L. Adams, Jacksonville.

A consideration of blindness, especially economic and educational blindness. A plea for an extension of the work of sight saving classes.

The advantage is not only financial gain by the state but of far more importance, the development of independence and self reliance by these pupils so that they may become self supporting and independent.

Discussion opened by Harry S. Gradle, Chicago.

9:30—"The Surgical Treatment of Spontaneous and Traumatic Detachment of the Retina." C. F. Yerger, Chicago.

Gonin's contribution to the pathogenesis and treatment of detachment of the retina. The role of retinal holes and tears. The method of localizing externally the holes and tears. The modern operative treatment of detachment of the retina; the methods of Gonin, Larsson, Meller and Guist. The indications and contraindications for the surgical treatment of detachment of the retina. Complications. Prognosis.

Discussion opened by J. F. Duane, Peoria.

10:00—"Ocular Signs on Findings of Exophthalmic Goiter." Elias Selinger, Chicago.

All the well known and many of the less well known eye signs and findings are described. Their manifestation, the manner in which they can be elicited, and their mechanism as well as the frequency of their occurrence are discussed.

Discussion opened by Leo M. Zimmerman, Chicago.

10:30—"Endocrines in Ophthalmology." Louis Bothman, Chicago.

A review of the literature on the subject is given which includes the relation of all the glands of internal secretion to the eye. Case reports of patients who developed exophthalmos after thyroidectomy are presented along with discussion as to the probable cause of such conditions.

Discussion opened by Beulah Cushman, Chicago.

Wednesday Afternoon, May 17, 1933

2:30—"Ocular Manifestations in Tryparsamide Treatment of Syphilis." Leo L. Mayer, Chicago.—R. Denton Smith, Chicago.

A statistical review of syphilitic cases treated with tryparsamide over an extended period. The study was made with the grouping as follows:

1. Optic atrophy—15 cases.
2. Tabes—20 case.
3. Paresis—14 cases.
4. Meningo-vascular—4 cases.
5. Asymptomatic—37 cases.

In the entire series of 90 cases visual fields and colorimetric evaluations of the optic discs were made. Conclusions as to the efficacy and dangers of tryparsamide therapy are discussed.

Discussion opened by W. W. Gailey, Bloomington.

3:00—"Pus in the Neck—Surgical Approach." Hanby L. Ford, Champaign.

A brief review of the surgical anatomy of the neck with particular emphasis on the pharyngo-maxillary fossa and sub-maxillary fossa approach for deep pus.

Discussion opened by A. B. Middleton, Pontiac.

3:30—"Opthalmoscopic Findings in Hypertension Conditions." James E. Lebensohn, Chicago.

The paper will deal with the findings in benign and malignant hypertension, arteriosclerosis of the retinal vessels, and the blood pressure findings of the central artery in these conditions.

The author hopes to illustrate by suitable fundus

photographs, and at the same time present the apparatus he is using for direct determinations of the blood pressure of the central retinal artery.

Discussion opened by G. F. Suker, Chicago.

4:00—"An Analytical Study of Squint Surgery." M. L. Folk, Chicago.

This is a review of 258 case records, comprising a total of 329 strabismus operations, performed by the Department of Ophthalmology of the University of Illinois, College of Medicine, during a period of seven years, ending July 1, 1932.

The following types of operations were included in this series: Complete, partical and guarded tenotomies; Recessions: Worth advancements: Briggs tuckings, Bishop tuckings, and resections by the Lancaster method.

The results of the above operative procedures are recorded and conclusions drawn as to their comparative value in given cases.

Discussion opened by H. Beard, Chicago.

4:30—"Moving Picture of the Dissection of Tonsils on the Cadaver and Living." R. H. Good, Chicago.

The work on the cadaver was done in the Otolaryngological Department of Rush Medical College by Dr. Palmer W. Good. The movie shows causes for failure to remove the entire tonsil, showing the tonsillo-pharyngeous muscle so well illustrated by Drs. R. Fowler and T. W. Todd.

Dissection of tonsil stumps is the most neglected field in medicine at the present time.

Discussion opened by Louis Schultz, Chicago.

Thursday Morning, May 18, 1933

Joint Meeting with Sections on Medicine, Surgery, Public Health and Hygiene, and Radiology.

8:30—12:00.

1.—"Radiologic Evidences of Diseases of the Biliary Tract." James T. Case, Chicago.

2.—"The Value of Combined Cholecystography and Liver Function Tests." Harold Swanberg, Quincy.

The successful therapy of a large percentage of gall bladder disease is surgery. Surgeons are frequently shocked to find their patient dead 24 or 48 hours after a simple cholecystectomy where no trouble was encountered at the time of operation. Such deaths invariably occur in patients with a poor liver function. The liver function can be fairly well determined by the intravenous injection of Iso-Iodeikon,—the same dye that is used for intravenous cholocystography. In making an x-ray examination of the ball bladder, why not use the intravenous method of cholecystography, which will not only enable us to determine the presence or absence of gall bladder pathology, but at the same time ascertain the operability of the patient?

3.—"The Etiology of Ocular Disease." Illustrated by lantern slides. Harry S. Gradle, Chicago.

4.—"Outlook for Public Health." Frank J. Jirka, Director, State Department of Public Health, Springfield.

Some of the more outstanding achievements in the field of public health are briefly reviewed. Prevailing health conditions at the time of the Columbian Exposition in Chicago in 1893 and at the present time when the Century of Progress is about to open are compared and briefly discussed. Some of the difficulties in the way of extending public health activities are pointed out. The effect of a declining birth rate and of increasingly effective control over communicable diseases and the consequent rise of the age level of the general population on the character of public health activities are discussed. The probable influence of such factors as the tuberculin skin test for the suseptibility for tuberculosis and the ability to impregnate milk with vitamin D are pointed out. Public health problems given prominence through the newer knowledge concerning nutrition and through industrial developments are appraised and the relation of public health departments and practicing physicians are touched upon.

5.—"The Detroit Plan." H. F. Vaughan, Commissioner of Health, Detroit, Michigan. (By Invitation).

6.—"The Management of Hepatic Diseases." Charles A. Elliott, Chicago.

The liver may be considered a mass of undifferentiated cells constantly changing in unision with physiologic and pathologic processes. Its parenchyma is peculiarly sensitive to toxic substances. A fairly uniform sequence of events ensues; i. e., parenchymatous damage, liver cell regeneration, connective tissue replacement, and the establishment of a compensatory circulation. Restitution to functional integrity may be greatly influenced by appropriate management. (Lantern slides.)

7.—"The Surgical Treatment of Gastric and Duodenal Ulcer." H. M. Richter, Chicago.

Surgical treatment of gastric and duodenal ulcer is often directed toward relieving some local condition that we regard as the cause of the ulcer. Short-circuiting operations and pyloroplasties come under this head. The fact is that we know nothing of the etiology of ulcer. The ulcer may be as far removed from its cause as the gummatous periosteal ulcer from the underlying syphilis. Excision of the ulcer is a poor makeshift. Most ulcers can be more satisfactorily removed by the internist with less risk and about the same incidence of recurrence.

Ulcers occur almost entirely within narrow anatomic limits. This area includes the lesser curvature, antrum, and the first portion of the duodenum. On a clinical basis this may be described as the ulcer-bearing segment or organ. This segment or organ can be removed. With its removal recurrence of the ulcer is so unusual as to raise the question of the adequacy of the operation, that is as to whether the entire segment was removed. This operation, partial gastrectomy for gastric and duodenal ulcer, has received very wide acceptance abroad but has met with opposition here except for the work

of a comparative few surgeons. The results are excellent; the mortality that of major abdominal surgery.

Discussion opened by Karl Meyer, Chicago.

SECTION ON PUBLIC HEALTH AND HYGIENE

John W. H. Pollard.....*Chairman*
J. Howard Beard.....*Secretary*

Tuesday Afternoon, May 16, 1933

3:00—"Cooperation Between Departments of Public Health and the Practicing Physicians." Andy Hall, Mt. Vernon.

Cooperation between physicians and the health department is necessary to success in any public health endeavor. The function of the health department is to ascertain where health conditions can be improved, then make the physicians and the public dissatisfied with prevailing conditions where improvement is economically possible. Physicians should furnish the service necessary to bring about the improvement. Every physician should be a public health officer. The morbidity and mortality in a community reflects the skill, energy and influence of the physicians in that community.

Discussion opened by W. R. Marshall, Clinton.

3:40—"The Relation of a Health Officer to His Community." Arlington Ailes, LaSalle.

As a groundwork or a background to serve a community the Health Officer must understand its population complex.

He must then select his progress to best serve the needs of his particular community. Even the approach to similar programs may differ radically in different communities. What may be mere routine in one community may of necessity be a major program in another.

The health officer has a great responsibility and he needs the sympathetic understanding and hearty cooperation of all groups in his community.

The health officer is a specialist in a special field. He must recognize signs of impending epidemics and plan long time programs.

He of all men needs a rare combination of vision, knowledge, courage, patience, tact and a fine sense of fairness to all groups of his community.

Discussion opened by E. S. Gillespie, Peoria.

4:15—"Military Hygiene." Major A. P. Hitchens, M. C., U. S. Army, Fort Sheridan.

The fundamental ideals of a public health service differ radically from those of military hygiene. In practice at the present time they are nearly identical. But the ultimate goal of the health officer is a state of environmental hygiene so perfect that communicable disease may find no means for transmission in his community. To the military hygienist the perfect army is one composed of vigorous, trained, and seasoned young men who are individually able to resist every form of infection in any type of environment.

Discussion opened by Col. J. J. McKinley, Illinois National Guard, Hines—Lt. Col. A. B. Middleton, Med-Res., Pontiac.

4:50—"School Hygiene." Mr. F. L. Bacon, Principal Evanston Township High School.

There is increasing educational interest in hygiene and health. Schools have developed a consciousness of the importance of health habits. Habits are not enough; the student also demands reasons. Scientific facts should form the basis for healthful activity. Different subjects offer instruction in building health ideals. There is a place for a definite hygiene course. Physical examinations emphasize health values and constructive follow-up for physicians. Correlation of the physical and the mental with the creation of active health attitudes, rather than curative practices, should be dominant aim of school hygiene.

Discussion opened by Mr. E. C. Fisher, Superintendent of Schools, Peoria.

Wednesday Morning, May 17, 1933

8:30—"Occupational Diseases." M. Earl Brennan, East St. Louis.

Prevalence of Occupational Diseases in Illinois.

Diseases recognized as occupational in Illinois Compensation Laws.

Industrial progress and Medical progress in prevention, recognition and treatment.

Non-industrial occurence of occupational diseases.

Discussion opened by Wm. C. Nordholtz, Chicago.

9:10—"Medical Organization in Industry." Don Deal, Springfield.

The physician in charge should be independent of outside influence and his word should be final, however, there must be a very close association and a spirit of cooperation between the medical and legal or claim department. He must be in a position to advise on health and prevention. Pre-occupational examination and re-examination of the employee is important from the standpoint of the employer, the employee and the public. With forty million wage earners in this country, the health of the Nation can be wonderfully improved through information and activities carried on in Industry.

Discussion opened by E. A. Degenhardt, Chicago.

9:50—"Health Engineering." Joel Connolly, Chicago Board of Health, Chicago.

A brief outline is given of some of the newer problems of industrial hygiene now being encountered. Especial reference is made to problems in which engineering plays a part in the solution. Control of poisonous dusts, causing lead poisoning and silicosis, and toxic fumes such as benzene, nitrobenzene, carbon tetrachloride and other solvents is discussed.

Experience in Chicago in the discovery of hazards to health and the means adopted for correction in a number of typical instances is given.

The importance of investigating the effect upon health of workmen whenever use is made of new processes and materials is emphasized.

Discussion opened by S. C. Beach, Chicago.

10:25—"Laboratory Tests and Methods Use-

ful and Necessary in Industrial Hygiene." Lloyd Arnold, Chicago.

Industrial hygiene can be considered as the outgrowth of the concentration of workers around machines. The air in enclosed spaces is polluted with gases and solid particles that are toxic to man. Industrial hygiene aims toward preventing the accumulation of materials around the worker that will be detrimental to his wellbeing. Industrialization has taken place too rapidly to expect the worker to adapt himself to the new atmospheric environment.

Blood examinations consist of examining the cellular as well as the fluid elements of the blood and detecting in the deviations from the normal, certain early intoxications. The hemoglobin determination, the differential cell counts, and the McCord test, can be given as examples of blood examinations in industrial hygiene. The coagulation time is also important in benzol poisoning. The examination of sputum, examination of feces and urine for products excreted by these routes can be cited as examples of laboratory methods in industrial hygiene. Various types of dermatosis are caused by fungi as in the laundry and baking industries. X-ray examinations for silicosis is another method of the laboratory in industrial hygiene. Dust detection in the air is another example of a laboratory method used to study air pollution in association with the worker. Testing the efficiency of various filtering mechanisms, respirators, etc. All of the laboratory tests and methods useful and necessary in industrial hygiene are only mechanical methods using instruments of precision to prevent intoxication of the worker by products produced in his environment.

Discussion opened by Frank J. Smith, Chicago.

Wednesday Afternoon, May 17, 1933

2:30—"Is Hay Fever a Public Health Problem?" Tell Nelson, Lecturer on Allergy, University of Illinois College of Medicine, Chicago.

Pollen, because of its great buoyancy, its quantity production and wide distribution, can be looked upon as a menace to health; seriously so to the three or four million hay fever cases in this country. The problem should be of vital importance to the health officer because of the sequelae which may follow hay fever. Concerted efforts by local, state and federal authorities thru the health departments can do much in eradicating the offending cause and in controlling the pollen problem.

Discussion opened by Ralph McReynolds, Quincy.

3:05—"The Importance of Immunization in the Control of Acute Contagious Disease." H. S. Houston, State Department of Public Health, Springfield.

The past century has witnessed some profound changes in relation to the causes and control of acute contagious diseases, some of which had their origin in antiquity.

A consideration of immunization must involve morbidity and mortality statistics over a period of years; and other pertinent factors concerning chiefly smallpox, diphtheria and typhoid fever, the latter of which has been regarded as infectious rather than contagious. Army records alone definitely establish the importance of immunization in control of smallpox and typhoid.

Steady progress in diphtheria control has been made, especially during the past ten years, as statistics will show. Toxoid as a specific protecting agent leaves little to be desired.

Scarlet fever toxin undoubtedly has immunizing value as shown by results obtained in institutions. The protracted course of treatment and the fear of reactions retards the progress of further developments.

Rabies and tetanus while not contagious are decidedly infectious, and transmissible, and should be included in the consideration of specific disease prophylaxis. Rabies has recently become a serious problem.

Recent work has been in connection with specific protection against whooping cough. Recognized authorities are divided in their opinion of results at the present time.

General cooperation among practicing physicians would make further investigations more productive.

Conclusions:

1. Effective measures for control of contagious disease have developed in a comparatively recent period.
2. Several factors are involved in these developments.
3. The value of immunization in the control of smallpox, diphtheria and typhoid fever is established.
4. More general employment of dependable measures would modify quarantine regulations.

Discussion opened by C. George Appelle, Champaign, W. M. Talbert, Decatur.

3:55—"Certain Widespread Misconceptions Concerning Preventable Disease." L. N. Judah, Urbana.

A study of answers by recent high school graduates to questions concerning the prevention of disease. Answers are tabulated with reference to ordinary problems of life and the ability of the student to participate in community welfare. They are also tabulated by age of student, size of home town, and previous health training. Common superstitions and misapprehensions are also given consideration.

Discussion opened by W. W. Bauer, American Medical Association, Chicago.

4:25—"A Physical and Mental Health Program for Custodial Schools." Lowell S. Selling, Institute for Juvenile Research, Chicago.

Discussion opened by S. B. Meyerson, St. Charles—Charles C. Rowley, Dixon.

Thursday Morning, May 18, 1933

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Ulcers occur almost entirely within narrow anatomic limits. This area includes the lesser curvature, antrum, and the first portion of the duodenum. On a clinical basis this may be described as the ulcer-bearing segment or organ. This segment or organ can be removed. With its removal recurrence of the ulcer is so unusual as to raise the question of the adequacy of the operation, that is, as to whether the entire segment was removed. This operation, partial gastrectomy for gastric and duodenal ulcer, has received very wide acceptance abroad but has met with opposition here except for the work of a comparative few surgeons. The results are excellent; the mortality that of major abdominal surgery.

Discussion opened by Karl Meyer, Chicago.

SECTION ON RADIOLOGY

P. B. Goodwin.....*Chairman*
Robert A. Arens.....*Secretary*

Tuesday Afternoon, May 16, 1933

2:30 P. M.

1.—"Clinical Application of Excretion Urography." Norris J. Heckel, Chicago.

There will be a short introduction in regard to the history and development of this procedure, followed by the technique and indications for its use. The main part is devoted to the clinical interpretation of the pyelograms and the differentiations between these interpretations and those from retrograde pyelograms. This is followed by a discussion of the urological diseases such as stones, hydronephrosis and obstructive uropathy which are suited for this procedure.

2.—"The Cystogram in Urological Diagnosis." Illustrated by lantern slides. H. J. Burnstein, Decatur.

Will attempt to cover the subject from the standpoint of procedure, indications, and cystographic diagnosis of pathological bladder conditions, namely inflammations, vesical neck obstructions, diverticula, tumor, and trauma. I will also have a short paragraph on urethrography.

3.—"Urologist and Roentgenologist; Their Inter-relationship." Bradford Adelsberger, Peoria.

A discussion of factors which enter into the interpretation of urologic films. A definite routine of x-ray examination is necessary for proper diagnosis.

The relationship between Roentgenologist and Urologist should be of such contact as to permit a thorough understanding on the part of each, of the pathology of

the situation at hand. Both Urologist and Roentgenologist must possess a knowledge of the normal anatomy and gross pathology of that part of the urinary system under examination. Clinical Urology teaches men which is of value to the Urologist and prompts him to suggest the exposing of films in various anatomic positions, or their being taken in such a manner as will tend to lead to a better diagnosis of the situation present.

4.—"Value of Roentgenograms in Lesions of the Urinary Tract." Arthur Sprenger, Peoria.

Discussion of symposium opened by:

a—Herman L. Kretschmer, Chicago.

b—H. B. Henkel, Springfield.

c—F. Flynn, Decatur.

4:30 P. M.—"Fungus Infections of the Lung." Frank Deneen, Bloomington.

X-ray findings are identical with those of tuberculosis except they are more diffuse and out of proportion to the physical findings. The diagnosis is made by sputum examination and treatment with potassium iodide is specific.

Discussion opened by M. Pollak, Peoria—Lawrence M. Hilt, Springfield.

Wednesday Morning, May 17, 1933

8:30—"Roentgenologic and Pathologic Diagnosis of Bone Tumors." M. A. Bernstein, Evanston.

The study is based upon the material of the Zeit Museum of Pathology at Northwestern University Medical School, and a selected number of cases from the American College of Surgeons Sarcoma Registry. No one class of tumors is dealt with in the paper,—it presents more or less typical cases of osteogenic sarcoma, Ewing's tumor, and benign, giant cell tumors.

The point stressed in the paper is that the early diagnosis of bone tumor cannot be made from a clinical finding alone, such as x-ray, biopsy of the history, but that the three factors must be taken into consideration.

Discussion opened by H. E. Cooper, and W. J. Roche, Peoria; and Walter Bain, Springfield.

9:00—"The Importance of Roentgenologic Examination of Growing Bones." Arthur Hawley Parmalee, Oak Park.

Rapidly growing tissues are very sensitive to systemic disturbances produced by disease. This particularly true of bone tissue. At the epiphyses of the long bones where enchondral ossification is an active process during infancy and childhood, very profound changes may occur in certain diseases. The visualization of these changes by means of the x-ray offers an unique opportunity to study the effect of disease on tissue. Certain diseases produce specific changes which can be recognized by pathologists as characteristics of a disease. These changes visualized by x-ray become more valuable aids in diagnosis during life. It is important that all physicians who have to do with the care of children be able properly to interpret the roentgenologic evidence of such diseases as rickets, scurvy, and congenital syphilis. Non-specific metabolic and toxic disease may cause temporary arrest of ossification and cause changes in bone structure recognizable in roentgenograms. A knowledge of the pathology of bone diseases is essential in the interpretation of roentgenograms.

Discussion opened by Charles D. Stulick, Chicago; John R. Vonachen, Peoria; and Henry W. Grote, Bloomington.

9:30—"Roentgenology of Intracranial Tumors." Loyal Davis, Chicago.

The progress of neurological surgery has been associated very closely with the utilization of diagnostic facts which have been supplied with roentgenograms. The Neurological surgeon and Roentgenologist have cooperated to perfect and evaluate the procedures which now constitute a part of the surgeon's diagnostic and therapeutic armamentarium. There have been many valuable contributions to the literature of the roentgenology of intracranial tumors during the past twenty five years.

It should not be forgotten that many of these call attention to diagnostic facts which do not require more than the interpretation of satisfactory roentgenograms of the skull. The voluminous literature concerning ventriculography and encephalography has tended to overshadow these contributions. It has also strengthened the tendency of some individuals to believe that all intracranial diagnoses may be made by mechanical methods without the necessity of repeated careful and accurate neurological examinations. It is manifestly impossible to reproduce every possible change in the bone of the skull, or every deformity of the ventricles, which a tumor might produce. Rather an attempt has been made to illustrate the basic changes demonstrable roentgenologically for which tumors of the brain are responsible. Every roentgenologist should have some general knowledge of the nature and characteristics of the various types of intracranial tumors; just as every neurological surgeon should have a good working knowledge of the roentgenological evidence of their presence. There can be no doubt that there are many changes in the skull produced by intracranial tumors of which we are not cognizant, or which defy early detection because of a lack of technical knowledge. The advent of the Bucky-Potter diaphragm, for example, has made the detection of calcium deposits in the brain much less difficult. The early changes in the bone of the porousa-custicus and foramen magnum in the presence of intracranial tumors are among the many points for which the surgeon must depend upon the roentgenologist for demonstration in the future.

Discussion opened by Emil Z. Levitin, Peoria, and F. W. Nickel, Eureka.

10:00—"Removal of Foreign Bodies in the Esophagus." (Method used thirty years ago.) C. U. Collins, Peoria.

"Present Methods of Removing Foreign Bodies." C. D. Sneller, Peoria.

Wednesday Afternoon, May 17, 1933

2:30—"Insurance Aspect of Roentgenologic Cardiology." Maximilian J. Hubeny, Chicago.

The constant increase in the mortality rate of cardio-renal-vascular disease demands its early recognition. Percussion and auscultation, while valuable, should be supplemented by roentgenological examination; even though the former two are expertly applied, certain definite limitations are encountered.

Discussion opened by R. E. Lee Gunning, Galesburg, and Harry A. Durkin, Peoria.

3:00—"Pneumoperitoneum and Surgery in Management of Abdominal Adhesions." Benjamin H. Orndoff, Chicago.

Pneumoperitoneum and x-rays make the diagnosis of fixed abdominal viscera by adhesions possible that can be ascertained by no other diagnostic methods. Fixation of viscera to the anterior abdominal wall is very frequently the cause of distressing abdominal symptoms. Fixation of the anterior border of the liver with portions of the gastro-colic omentum are almost always symptom producing. Many cases show fixation of the greater omentum and occasionally portions of the colon to the anterior abdominal wall with comparatively little symptomatic distress. Separation of adhesions by operative intervention without pneumoperitoneum is not frequently attended with success. The technique of transabdominal pneumoperitoneum is not difficult and when the proper care is exercised it is a safe procedure.

Discussion opened by Homer D. Junkins, Paris, and Arthur E. Perley, Quincy.

3:30—"Tuberculosis in Childhood with X-ray and Post Mortem Slides." Eugene T. McEnery, Chicago.

A comparative study of ante and post-mortem roentgenograms with observations at necropsy.

This study of tuberculosis in children, varying in age from infancy to fifteen years, was made on patients at the Children's Memorial Hospital and Municipal Tuberculosis Sanitarium, Chicago. It was undertaken to try and correlate what pathological changes were present in the lungs of children to account for shadows in the roentgenogram of the chest. A careful history of every patient was taken, together with repeated physical examinations and necessary laboratory work. Roentgenograms of the chest were made at frequent intervals during life. If the patient died, films were taken of the chest post-mortem and finally films were made of the excised lungs in many cases. Special attention was made of primary focci, tuberculous hilum, miliary tuberculosis, fulminating tuberculosis and tuberculosis bronchopneumonia. From these observations it was concluded, that the evidence of tuberculosis is not found pathologically as frequently as one would expect from the diagnosis of films of the chest.

Discussion opened by: a. Fred M. F. Meixner, Peoria. b. Thomas Cantral, Bloomington.

4:00—"Radiotherapy and Surgery in the Treatment of Malignancy." Homer Junkin, Paris.

The subject is discussed from the standpoint of the rural surgeon. It is pointed out that proper radiotherapy equipment for treating malignancies is as essential as the usual outlay of surgical instruments. A brief summary of technique used by the author is given and five case histories are related as examples of application of radiotherapy and surgery in treating malignancies. In closing, the author favors a closer cooperation between the surgeon and radiologist. It is suggested that a competent member of the profession in the rural centers could carry on radiotherapy under the guidance of a recognized radiologist in one of the larger centers.

Discussion opened by: a. C. U. Collins, Peoria. b. E. G. C. Williams, Danville.

4:30—"The Proper Education and Registration of X-ray Technicians." Gentz Perry, Evanston.

Brief history of origin of the need of Technical X-Ray workers. Brief mention of the origin of the American Registry of X-Ray Technicians and of the development of this Registry Board. Explanation of the need of a reasonably uniform standard of Education, Registration and Control of X-Ray Technical workers.

Discussion opened by: a. James Archibald, Danville. b. Perry B. Goodwin, Peoria.

Thursday Morning, May 18, 1933

Joint Meeting with Sections on Medicine, Surgery, Eye, Ear, Nose and Throat, and Public Health and Hygiene.

8:30—12:00.

1.—"Radiologic Evidences of Diseases of the Biliary Tract." James T. Case, Chicago.

2.—"The Value of Combined Cholecystography and Liver Function Studies." Harold Swanberg, Quincy.

The successful therapy of a large percentage of gall bladder disease is surgery. Surgeons are frequently shocked to find their patient dead 24 or 48 hours after a simple cholecystectomy where no trouble was encountered at the time of operation. Such deaths invariably occur in patients with a poor liver function. The liver function can be fairly well determined by the intravenous injection of Iso-Iodeikon,—the same dye that is used for intravenous cholecystography. In making an x-ray examination of the gall bladder, why not use the intravenous method of cholecystography, which will not only enable us to determine the presence or absence of gall bladder pathology, but at the same time ascertain the operability of the patient?

3.—"The Etiology of Ocular Disease." Illustrated by lantern slides. Harry S. Gradle, Chicago.

4.—"Outlook for Public Health." Frank J. Jirka, Director, State Department of Public Health, Springfield.

Some of the more outstanding achievements in the field of public health are briefly reviewed. Prevailing health conditions at the time of the Columbian Exposition in Chicago in 1893 and at the present time when the Century of Progress is about to open are compared and briefly discussed. Some of the difficulties in the

way of extending public health activities are pointed out. The effect of a declining birth rate and of increasingly effective control over communicable diseases and the consequent rise of the age level of the general population on the character of public health activities are discussed. The probable influence of such factors as the tuberculin skin test for the susceptibility for tuberculosis and the ability to impregnate milk with vitamin D are pointed out. Public health problems given prominence through the newer knowledge concerning nutrition and through industrial developments are appraised and the relation of public health departments and practicing physicians are touched upon.

5.—"The Detroit Plan." H. F. Vaughan, Commissioner of Health, Detroit, Michigan. (By Invitation.)

6.—"The Management of Hepatic Disease." Charles A. Elliott, Chicago.

The liver may be considered a mass of undifferentiated cells constantly changing in unison with physiologic and pathologic processes. Its parenchyma is peculiarly sensitive to toxic substances. A fairly uniform sequence of events ensues; i.e., parenchymatous damage, liver cell regeneration, connective tissue replacement, and the establishment of a compensatory circulation. Restitution to functional integrity may be greatly influenced by appropriate management. (Lantern slides.)

7.—"The Surgical Treatment of Gastric and Duodenal Ulcer." H. M. Richter, Chicago.

Surgical treatment of gastric and duodenal ulcer is often directed toward relieving some local condition that we regard as the cause of the ulcer. Short-circuiting operations and pyloroplasties come under this head. The fact is that we know nothing of the etiology of ulcer. The ulcer may be as far removed from its cause as the gummatous periosteal ulcer from the underlying syphilis. Excision of the ulcer is a poor makeshift. Most ulcers can be more satisfactorily removed by the internist with less risk and about the same incidence of recurrence.

Ulcers occur almost entirely within narrow anatomic limits. This area includes the lesser curvature, antrum, and the first portion of the duodenum. On a clinical basis this may be described as the ulcer-bearing segment or organ. This segment or organ can be removed. With its removal recurrence of the ulcer is so unusual as to raise the question of the adequacy of the operation, that is, as to whether the entire segment was removed. This operation, partial gastrectomy for gastric and duodenal ulcer, has received very wide acceptance abroad but has met with opposition here except for the work of a comparatively few surgeons. The results are excellent; the mortality that of major abdominal surgery.

Discussion opened by Karl Meyer, Chicago.

RULES GOVERNING THE PRESENTATION OF PAPERS

All papers read by members shall be limited to twenty minutes and remarks in discussion to five minutes, floor privilege being allowed only once for the discussion of any one subject.

All papers read before the Society or any of its Sections shall become the property of the Society. Each paper shall be deposited with the Secretary of the Section when read and the presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already appeared and will not appear in medical print before it has been published in the Illinois Medical Journal.

A paper not heard in its scheduled turn shall be held subject to the call of the Chairman of the Section at the end of the regular session if time permits, or as an alternative at the end of the program.

All subjects shall be confined strictly to the subject in hand.

No paper shall appear in the printed transactions of the meeting unless read in full or in abstract.

(From the By-Laws of Illinois State Medical Society.)

EXHIBITORS AT THE 1933 ANNUAL MEETING

Abbott Laboratories, North Chicago.

A. S. Aloe Company, St. Louis.

DePuy Manufacturing Company, Warsaw, Indiana.

R. B. Davis Company, New York City.

General Food Sales Company, New York City.

Gerber Products Division, Freemont Canning Company, Freemont, Michigan.

G. F. Harvey Company, Peoria.

Horlick's Malted Milk Corporation, Racine, Wisconsin.

Kellogg Company, Battle Creek.

J. B. Lippincott Company, Philadelphia.

Mead Johnson Company, Evansville, Indiana.

The Medical Protective Company, Chicago.

Mellin's Food Company, Boston.

Sharp & Smith, Chicago.

Sutliff & Case Company, Peoria.

Universal Products Corporation, Pottstown, Pa.

Commercial Art Press, Monmouth, Illinois.

American Medical Association, Chicago.

American Society For The Control of Cancer, New York City.

American Social Hygiene Association, New York City.

Illinois Department of Public Health, Springfield.

Illinois Tuberculosis Association, Springfield.

Milton Bohrod, Fresh Pathologic Tissue Demonstration, Peoria.

Illinois State Medical Society, Section on Radiology.

Educational Committee, Illinois State Medical Society.

Groves B. Smith, Beverly Farm Inc., Godfrey.

Harold Swanberg and Arthur E. Perley, Quincy.

West Suburban Hospital, Oak Park.

Ravenswood Hospital, Chicago.

Chicago Society of Allergy, Chicago.

E. L. King, Radiologic Supplies, Peoria.

C. V. Mosby Company, St. Louis, Missouri.

Cook County Graduate School of Medicine, Chicago.

Frank J. Otis, Moline.

V. Mueller & Company, Chicago.

Charles C. Thomas, Publisher, Springfield.

Mother's Milk Bureau of Chicago.

NOTES ON EXHIBITS

The Abbott Laboratories Exhibit will feature concentrated vitamins, with Haliver Oil as an outstanding product.

Medical science of today recognizes the importance of a high vitamin diet and these concentrated products should not be considered as another fad, but as something that must be studied seriously by every physician. The Abbott representatives will discuss the scientific background.

The A. S. Aloe Company invites everyone attending the 83rd Annual Meeting of the Illinois State Medical Society to visit Booth No. 25. The Aloe booth will feature a display of the new Aloe Radio Knife, a complete line of Chrome Plated Instruments, Dressings and Sundries at special low prices, and the Gold Seal Portable Diatherm.

The DePuy Manufacturing Company of Warsaw, Indiana, exhibit in booth No. 8, a new rocking leg splint, which eliminates bed pan trouble. No weights—chromium plated—rests on any bed. Used for treatment of femur, lower leg fractures and gunshot wounds.

The idea in constructing this splint was to make reduction easy for the surgeon, traction simple and greater comfort for the patient. Satisfied patients hasten recovery and insure better results. Come in and see us as you are always welcome. "Red" Bates will be there to serve you.

Visiting physicians and their friends are invited to stop at the booth occupied by R. B. Davis Company, where they may secure full information relative to Cocomalt.

Cocomalt is a scientific food concentrate in powder form. It is a delicious food drink composed of natural food ingredients in correctly balanced proportion to provide essential elements required for the well-being of the body. Cocomalt is prescribed and used by physicians in their private, hospital and clinical practice with a very high degree of success.

Cocomalt will be served either hot or cold to all persons in attendance so that they may judge as to "its quality and flavor."

The booth is in charge of representatives who will be pleased to answer questions concerning Cocomalt.

"Sanka Coffee is real coffee of rare excellence and has been accepted by the Committee on Foods of the American Medical Association with the statement 'is free from caffeine effect and can be used when other coffee is forbidden.'

"Sanka Coffee is decaffeinated before the coffee beans are roasted which leaves intact all its mellow flavor and fragrance. It is so rich and satisfying in flavor that the patient never craves caffeine-containing coffee."

Visit booth No. 54 and taste for yourself the deliciousness of Sanka Coffee.

The new Gerber product, Cereal, cooked in milk and strained, ready for feeding, will be on display at the Gerber Booth, No. 31. This food is intended as the first semi-solid food for infants. A combination of whole wheat cereals with added wheat germ is cooked in whole milk and then strained so as to retain the nutrients of the whole grains. The resulting product is such a fineness that clinical trials have been made with infants of four and five weeks of age, who have been difficult feeding cases, with good results.

Information and a display of all Gerber products, Cereal, Vegetables and Prunes, and copies of publications are at the booth and available to you.

The G. F. Harvey Company of Saratoga Springs, New York, and Peoria, will display many of their special pharmaceutical products. A generous supply of samples of their specialties will be available to those who desire them. A cordial invitation is extended to all visitors to visit their Peoria office and stock rooms.

Horlick's Malted Milk Corporation, in booth No. 24, will exhibit the original malted milk and Horlick's Malted Milk Tablets, both products in natural and chocolate flavors. Recent experiments have shown that the regular use of Horlick's not only definitely improves the appetite, but also builds strength and resistance to colds, and other diseases. Also Horlick's Maltose and Dextrin milk modifier will be displayed, which has achieved marked success in infant feeding.

In the Kellogg Booth at the Meeting of the Illinois State Medical Society, there will be an interesting display comparing the value of All-Bran with other commonly used foods in iron and Vitamin B content.

Kaffee Hag Coffee and All-Bran cookies will be served at the booth to visitors. Miss Florence Cooley of the Home Economics Department, Kellogg Company, Battle Creek, Michigan, will be in charge of the exhibit.

J. B. Lippincott Company will feature the Every Day Practice Series, edited by Harlow Brooks, consisting of monographs on important every day subjects by eminent writers, the binding of these volumes is a reproduction of a celebrated hand-tooled leather binding of 1499. They will also display the new Practical Fractures by Magnuson, the new Fuchs' Diseases of The Eye, translated by E. V. L. Brown; the new Operative Surgery by Kirschner, translated by Ravdin of the University of Pennsylvania, familiarly known as the Color Surgery; Children's Tonsils, In or Out? by Kaiser; Surgical Errors and Safeguards, by Thorek; and Tumors of the Breast by Cheatle and Cutler.

Mead Johnson and Company, Evansville, Indiana, has on exhibit its complete line of infant diet materials including Dextri-Maltose—Meads Newfoundland Plain or Flavored Cod Liver Oil—Meads Viosterol—Meads 10 D Cod Liver Oil—Meads (A-D) Viosterol in Halibut Liver Oil 250 D—Meads Undiluted Halibut Liver Oil—Meads Brewers Yeast Tablets—Meads Cereal-Sobee-Florena or Sunshine Flour—Meads Dry Malt Soup Stock—Meads Powdered Whole Milk-Alacta-Recolac-Casec—Meads Mineral Mixture No. 85.

There will be also for the examination of physicians a complete line of Mead's services such as diets for older children—Height and weight charts, etc., all of which are free to members of the Medical Profession in any quantity desired.

Representatives will be on hand to meet their friends and to discuss the application of any of the Mead products to infant feeding problems.

All members of the Illinois State Medical Society and their friends are cordially invited to visit booth No. 38 of the Medical Protective Company. Mr. M. L.

Allen, of the Peoria office will be delighted to have you call, whether merely to say "hello" and renew old acquaintances or to satisfy yourself on some questions of mal-practice protection. Consider him at your service and feel free to call upon him for anything which may contribute to making this the most pleasant and successful Society Meeting you have ever attended.

The Mellin's Food Company, Boston, will display their well known products, showing the source, nature and amount of food elements that enter into the making of Mellin's Food, the composition of the finished product, the caloric value of various quantities by weight and by measure, and what Mellin's Food accomplishes as a modifier of milk in the feeding of infants and adults.

All physicians are cordially invited to visit this exhibit, to ask questions and to offer suggestions that will lead to a thorough understanding of Mellin's Food, and its purpose.

Sharp and Smith, the old reliable Chicago surgical supply house will again present to the medical profession of Illinois a complete line of surgical and hospital supplies suitable for their selection, regardless of the particular line in which they may be interested. Specialists as well as general physicians may find many articles of interest at the exhibit which will be well worth a few moments of their time. Mr. Frazin, known throughout the State by those physicians who visit in Chicago, will be at the exhibit to look after your wants.

Sutliff & Case Company, Peoria, will have an interesting display of their products, with some of the more popular, and newer specialties for the man in practice. They will also have surgical instruments, supplies, and a general line of accessories which will be of interest to the physicians attending the meeting. A cordial invitation is also extended to all members and guests of the Society to visit their large Peoria store while in the City.

The Surgeon's "X-L-LYTE" displayed by the Universal Products Corporation, of Pottstown, Pa., will meet with the approval of all physicians, as it is a compact, electric diagnostic set, at low cost, contained in a neat, leather zipper case. This unique inexpensive diagnostic light has an otoscope, tonsil pillar retractor, tongue depressor, nasal speculum, and magnifying lens, and is also well adapted for transillumination. See this interesting diagnostic case, and you will want one.

The Commercial Art Press, Monmouth, Illinois, high class printers, will have an interesting display of several grades of printing for physicians which will be suitable to your special requirements. If you want physicians' stationery, prescription blanks, general office supplies, files, or special "set-ups," tell them what you want and get their prices which will be a surprise to you, and will fit your pocket-book.

The American Medical Association exhibit will show the Members of the Association what is being done for them, as well as for the Public at large in the way of affording additional protection against fraudulent representations.

Hospital exhibit showing the work of the Council on Medical Education and Hospitals of the A.M.A. Mechanical apparatus, maps and charts will show the hospital situation in Illinois and the country at large.

Health education exhibit showing the work of the Bureau of Health and Public Instruction of the A.M.A. Mechanical apparatus, maps and charts will show the radio activities of the Bureau with health education material that the physician can use for public addresses to schools, clubs and other similar gatherings.

Physical Therapy exhibit, showing the work of the Council on Physical Therapy of the A.M.A. Charts and posters will depict the advantages and disadvantages of certain forms of physical therapy.

Tularemia exhibit from the Central Scientific Exhibit of the A.M.A. An exhibit prepared by Edward Francis, which received a gold medal in the Scientific Exhibit of the A.M.A., now installed in the Central Scientific Exhibit at the American Medical Association.

The Exhibit of the American Society for the Control of Cancer will show the Canti film of living normal and malignant tissue and the effect of radium emanation on these tissues. There will be moulages of breast cancer of different types and photographs of the method of transillumination of breasts. Charts will be shown of cancer mortality and morbidity distribution by counties in Illinois and in the United States as a whole. There will be literature available both for the profession and for the laity.

Congenital Syphilis—a cooperative exhibit collected by the American Social Hygiene Association, of material contributed by:

Dr. Charles C. Dennie, Kansas City, Mo.

The late Dr. John H. Foote, and Dr. Fred Coe of Washington, D. C.

Dr. Isadore Rosen, New York City.

Dr. Bernard Samuels, New York City.

Dr. Mihran B. Parounagian, New York City.

Dr. Carroll S. Wright, Philadelphia, Pa.

Dr. Thomas J. Hill, Cleveland, Ohio.

It includes photographs of clinical cases; x-ray prints of infantile syphilitic bones; charts of familial neurosyphilis; casts of syphilitic teeth, and microphotographs of their development; and colored drawings of eye.

The Illinois State Department of Public Health will have an interesting exhibit, showing a motion picture film and the proper method of taking specimens for diagnostic laboratory examinations and giving reasons why specimens should be taken in the way recommended. It is the idea of the Department that this picture should be shown several times a day in some area of the space available for exhibits. In addition to the film mentioned above, the Department has three other motion picture films that deal with laboratory procedures and laboratory services.

The Department will also exhibit four charts that relate to the trends in mortality from the principal causes of death in this State.

It is believed that these charts would be of some interest to the medical profession.

The Illinois Tuberculosis Association is arranging an unusually interesting scientific exhibit giving information on the progress, in Illinois, of combatting the

great "White Plague." Some excellent x-ray films will be shown to illustrate some interesting phases of this work. Various charts and diagrams will be available to show the improvement in mortality and morbidity from Tuberculosis in Illinois.

Dr. Milton Bohrod, Peoria pathologist, will give daily demonstrations of fresh pathologic tissue, which will be of interest to all physicians attending the meeting. This method of displaying interesting pathologic lesions, at medical meetings, has been increasing in popularity the past few years, and it is the desire of Dr. Bohrod to demonstrate pathologic lesions of general interest to all physicians at the meeting.

Dr. Groves B. Smith, Superintendent of the Beverly Farm Home and School for Backward Children, will demonstrate mental abilities of the varying grades of mental deficiency as illustrated by a moving picture demonstration of the practical application of the training of these various levels, a demonstration of the finished products that have been carried out by these individuals.

The idea is to bring to the physicians a better recognition of the types of mental deficiency and the types of training which can be given to each particular type of individual.

Drs. Harold Swanberg and Arthur E. Perley, Quincy, Illinois, will feature in their exhibit "Roentgen Diagnosis." They will show by reductions made from Roentgenograms, the wide application of X-ray diagnosis in the present day practice of Medicine. Interesting roentgenograms of foreign bodies, bone pathology, joint disease, fractures, dislocations, bursae, heart disease, pulmonary pathology, gastrointestinal tract, gall bladder, genito-urinary tract, pregnancy, teeth, sinuses, mastoids, etc., will be shown.

It is the desire to show in this exhibit some of the practical every day applications of the X-ray in modern medical diagnosis, especially to the general practitioner.

Four Departments of the West Suburban Hospital, of Oak Park, will be represented in their unusual exhibit.

Dr. E. C. Piette,—Demonstration of specimens of general pathology and of some rare tumors.

Dr. Homer Humiston,—Specimens of Urologic pathology and use of resectoscope.

Dr. W. J. Potts,—Demonstration on Fractures; wire traction outfit; and walking cast.

Dr. W. R. Williams,—Corrosion preparations of heart and lung, particularly with regard to collapse therapy.

E. L. King, Central Illinois representative of Dick-X-Ray Company, St. Louis, is exhibiting X-ray illumination. 4,000 milliampere radiograms, X-ray tubes and electrocardiograph will be shown in the exhibit.

V. Mueller & Company's exhibit in Booths 4 and 5 will contain their usual interesting line of surgical instruments and equipment, and also many new items, including the latest types of Blood Pressure Instruments and Resectoscopes. Ask for a demonstration of the VIM-SHEFTEL Colorimeter which enables every physician to do his own blood chemistry analysis economically and accurately.

MEDICAL ETHICS

In the recent past lay people and some doctors have been disposed to make light of the code of ethics of the medical profession and to charge that it has stood in the way of progress. A little change in this attitude is noted. Just a few days ago a prominent business man was heard to remark to a doctor as follows: "How I wish we had in business some such code of ethics as you doctors have." The code doubtless has been in the way of some activities which some men have designated "progress," but there is a considerable amount of evidence to the effect that the thing these men called progress was not progress at all. It was a selfish end they were seeking.

On every side there is being brought further into the light of day evidences of the unwholesome effects which result from the use of power of whatever character ungoverned by fundamental ethical principles. This power may be financial. It may be political. It doesn't matter so much where the power originates. It is the use of it after all and the abuse of it which matters.

Our experiences and observations in the recent two and a half years are having the effect of impressing upon our minds the value of ethical principles as applied to the profession of medicine and as applied to business and to government. It is beginning to be apparent that material progress ungoverned by ethical principles amounts to worse than nothing.

Our code may be in the way of some forms of so-called progress. We are firm in the faith, however, that progress ungoverned will terminate in disaster; that the road to genuine progress and the happiness of humanity is the road on which travelers are governed not merely by laws but by ethical principles and the sooner unethical politics and unethical business and unethical banking are "tabooed" irrespective of whether or not unethical conduct is within the law, the sooner genuine progress will be established.—*The Journal of the Tennessee State Medical Association.*

LIPODYSTROPHY: ATROPHY AND TUMEFACTION OF SUBCUTANEOUS TISSUE DUE TO INSULIN INJECTIONS

Albert H. Rowe and Olin H. Garrison, Oakland, Calif. (*Journal A. M. A.*, July 2, 1932), review the literature on lipodystrophy following insulin injections and report that during the last nine years they have observed two instances of this condition. Recently they have carefully examined the tissues of fifty patients whose ages varied from 7 to 79, with an average age of 40.6 years, and who had taken insulin for an average of one year. Definite atrophy was observed in two additional cases. The absence of atrophic reaction in more of the patients may be due to the emphasis the authors have already laid on the importance of the variation in the site of injection. Definite fatty atrophy of subcutaneous tissue occurred in one patient who had received pollen therapy in the same area once a week for ten months. This corroborates the opinion of Lawrence that mechanical injury of the fatty cells may be the true cause of the atrophy.

PICTURESQUE PEORIA

CONVENTION HEADQUARTERS



PERE MARQUETTE HOTEL



PEORIA COUNTRY CLUB



PEORIA LIFE BLDG.



BUSINESS DISTRICT



ST. FRANCIS HOSPITAL



JAPANESE GARDEN, BRADLEY PARK



ST. FRANCIS HOSPITAL CHAPEL



ST. FRANCIS HOSPITAL



GOLF COURSE, MADISON PARK



BUSINESS DISTRICT
FROM WATER FRONT
(Left)

MT. HAWLEY COUNTRY CLUB
(Right)





AIRPORT
(Left)



METHODIST HOSPITAL
(Left)

IVEY YACHT CLUB
(Right)





GLEN OAK PARK
(Left)



JEFFERSON HOTEL



LEHMANN BUILDING
PEORIA LIFE BLDG.
View from Court House Square



PEORIA COUNTRY CLUB

REPORT OF EDUCATIONAL COMMITTEE

March and April, 1933

SCIENTIFIC SERVICE:

50—Scientific papers scheduled for the following county medical society meetings:

Alexander, Aurora Medical Society, Bureau, Central Illinois District, Clinton County, Iowa, Coles-Cumberland, Fulton, Franklin, Henry County, Indiana, Hardin County, Iowa, Jackson, Johnson, Kankakee, LaSalle, Lake, McLean, Monroe, Macon, Mercer, Paris Hospital, Peoria, Perry, Rock Island, Union, Vermilion, Whiteside, Will-Grundy.

SPEAKERS' BUREAU:

108—Speakers scheduled to address lay meetings on subjects relating to:

The Evolution of Medicine, William Beaumont, Romance of Medicine, Sex Hygiene, Plastic Surgery, Mental Hygiene, Blindness, Periodic Health Examination, Physical Therapy, How Medical Science Protects the Child, X-Ray and Radium, Health of the Child, Health of the Adult, Health and the Depression, Contagious Diseases, Tuberculosis, Adolescence, Problems of Nursing, The Glands of Internal Secretion, Patent Medicines, Cancer.

Doctor Roswell T. Pettit of Ottawa has presented the Educational Committee with a most interesting illustrated lecture on the story of X-ray and Radium. This lecture and the slides may be secured from the office of the Educational Committee.

RADIO:

107—Radio programs were given from stations WGN, WJJD, WAAF and KYW.

PRESS SERVICE:

1,979—Releases to Illinois newspapers:

732—Regular press service, 49—Monthly service, 66—Home Bureau Advisers, Articles on "Colds", 84—Newspapers about the National Institute of Health, 62—Notices about Fulton County Medical meeting, 17—Newspapers about Johnson County Clinic for Handicapped children, 98—Newspapers about McLean County meeting, 41—Newspapers about Perry County Medical Society, 15—Community newspapers about branch meeting of Chicago Medical Society, 4—Announcements to Chicago Chamber of Commerce about Chicago Medical Society meetings, 51—Newspapers about Bureau County, 39—Newspapers about Henry County meeting, 57—Newspapers about LaSalle County, 71—Newspapers about McLean County public meeting, 578—Newspapers about Annual Meeting of the Illinois State Medical Society.

11—Health articles written on the following topics—"Heredity," "Thumb Sucking," "Some Types of Skin Disease," "Nursery Care of the Infant," "Causes of Insomnia," "Functions of the Nose," "A Skin Test for Tuberculosis," "Rest," "Diabetes in Children." "The Child Who Will Not Eat," "Immunization Not An Experiment."

MISCELLANEOUS:

Contact made with members of the Veterans' Service Committee.

Cards mimeographed for the Chicago Woman's Club announcing Health programs to be given by physicians at the Navy Pier during the summer.

Assistance with clinics for handicapped children in Johnson County.

236—Notices sent to doctors about Franklin County Medical meeting.

169—Notices sent about special program of Perry County Medical Society.

340—Notices prepared for the Woman's Auxiliary to Chicago Medical Society.

350—Notices prepared for doctors announcing meeting of LaSalle County Medical Society.

213—Notices sent doctors about meeting of Bureau County.

Contact made with the Illinois Branch of the American Academy of Pediatrics and information sent to county medical society secretaries.

Letters sent out for the Medical Economics Committee.

368—Notices sent to women physicians of Cook County announcing special program for medical women at the Annual Meeting of the Illinois State Medical Society and special notices sent to down state women physicians.

Moving picture films secured for lay and professional groups.

Package libraries furnished physicians and students.

Arranged with American Medical Association to present exhibit at the Annual Meeting of the Illinois Congress of Parents and Teachers.

Announcements of health week and suitable programs sent to secretaries of county medical societies and principals of high schools.

Special literature and press releases furnished for Health Promotion Week.

Outlined series of programs for Morton Junior College.

Respectfully submitted,
Jean McArthur, Secretary

MEETING OF CENTRAL STATES SOCIETY OF INDUSTRIAL SURGERY

The Central States Society for Industrial Surgery will hold its meeting at the Pere Marquette Hotel, Peoria, on Tuesday, May 16, 1933, the first day of the Annual Meeting of the Illinois State Medical Society.

The meeting will begin at 9:30 A.M. and continue until noon, and will continue in the afternoon, following the Oration in Medicine.

An interesting program has been prepared including a fracture paper, a symposium on back injuries and the discussion on industrial hazards. All members of the Illinois State Medical Society are invited to attend the session.

S. H. Easton, M. D.
Peoria Chairman.

WHEN JUSTICE WINKS

The magistrate bent stern brows on the defendant.

"You are charged with exceeding the speed limit last night," he declaimed. "Are you guilty or not guilty?"

"Well, you can decide for yourself, Judge," replied the prisoner. "I was in that car you passed just before they pinched me."—*American Legion Monthly.*

POST-GRADUATE LECTURES IN PEDIATRICS

To be brought to the General Practitioner in the State of Illinois by the American Academy of Pediatrics with the approval of the Educational Committee of the State Medical Society.

It is planned to give a one day Pediatric lecture course in each of eleven districts in the State during the summer of 1933. The time of the meeting will be arranged for by each District Chairman, all subject to the desire and approval of the several County Societies.

The following are the Counties included in each district with the name and address of the District Chairman and the name of the city in each district which has been *tentatively* selected for the meeting.

District 1. Chairman, Dr. Joseph K. Calvin, 104 S. Michigan Avenue, Chicago, Ill. Counties: McHenry, Lake, Kane, DuPage, Cook. Place of meeting: Chicago.

District 2. Chairman, Dr. Woodruff L. Crawford, 321 W. State St., Rockford, Ill. Counties: Winnebago, Boone, Stephenson, Ogle, Carroll, Jo Daviess, De Kalb. Place of Meeting: Rockford.

District 3. Chairman, Dr. Woodruff L. Crawford, 321 W. State St., Rockford, Ill. Counties: Rock Island, Mercer, Whiteside, Henry, Warren, Henderson. Place of Meeting: Rock Island.

District 4. Chairman, Dr. John F. Carey, 500 N. Ottawa St., Joliet, Ill. Counties: La Salle, Lee, Bureau, Putnam, Livingston, Kankakee, Will-Grundy, Kendall. Place of Meeting: La Salle.

District 5. Chairman, Dr. John R. Vonachen, 410 Main St., Peoria, Ill. Counties: Peoria, Marshall, Woodford, Stark, Razewell, Fulton, Knox. Place of Meeting: Peoria.

District 6. Chairman, Dr. Gerald M. Cline, 214½ W. Washington St., Bloomington, Ill. Counties: Sangamon, Menard, Mason, Logan, Case, Morgan, Christian, Macon. Place of Meeting: Springfield.

District 7. Chairman Dr. Arthur H. Parmalee, 310 S. Michigan Av., Chicago, Ill. Counties: Adams, Hancock, McDonough, Schuyler, Brown, Pike, Scott. Place of Meeting: Quincy.

District 8. Chairman, Dr. Gerald M. Cline, 214½ W. Washington St., Bloomington, Ill. Counties: Champaign, Iroquois, Ford, McLean, DeWitt, Piatt, Moultrie, Coles, Douglas, Vermilion, Edgar. Place of Meeting: Champaign.

District 9. Chairman, Dr. Stanley Gibson, 9503 Prospect Av., Chicago, Ill. Counties: St. Claire, Greene, Macoupin, Montgomery, Bond, Clinton, Washington, Randolph, Monroe, Madison, Jersey, Calhoun. Place of Meeting: East St. Louis.

District 10. Chairman. Dr. Heyworth N. Sanford, 952 N. Michigan Av., Chicago Ill. Counties: Effingham & Fayette, Shelby, Clark, Jasper, Crawford, Lawrence, Richland, Clay, Marion. Place of Meeting: Effingham.

District 11. Chairman, Dr. John S. McDavid, 715 Lake St., Oak Park, Ill. Counties: Franklin, Jefferson-Hamilton, Wayne, Edwards, Wabash, White, Gallatin, Saline, Williamson, Jackson, Union, Alexander, Pulaski, Massac, Johnson, Pope, Hardin, Perry. Place of Meeting: Benton.

The five following Pediatricians from the various Medical Schools and Hospitals in Chicago have been selected to organize groups of teachers. They will choose their teachers from Pediatricians down State and from Chicago.

Dr. Isaac A. Abt, 104 S. Michigan Av., Chicago, Ill. Dr. Julius Hess, 104 S. Michigan Av., Chicago, Ill. Dr. Joseph Brennemann, 707 Fullerton Av., Chicago, Ill. Dr. C. G. Grulee, 636 Church St., Evanston, Ill. Dr. R. D. Black, Del Prado Hotel, Chicago, Ill.

County Secretaries are requested to aid the District Chairman in organizing their respective districts for such a meeting. *No Post-Graduate Program will be given in any District unless the physicians in the District want it.*

This is to be an educational program given with the hope of arousing greater interest on the part of the General Practitioner in the care of the sick and well child, and to better fit the General Practitioner to be the leader in all child welfare programs in his community and to help make every Doctor's office a health center. The following is a brief outline of the subjects to be presented at these meetings:

1. Care of the newborn.
2. Care and feeding of infants.
3. Discussion of preventive Pediatrics.
4. Behavior problems and discipline in children.
5. General treatment of the sick child.
6. Question box.

It is the hope of the Committee that this will meet with such approval on the part of the general practitioners that other similar Courses may be arranged for.

George Edwin Baxter,
State Chairman of the American Academy of Pediatrics for Illinois.
4753 Broadway, Chicago Ill.

DINNER FOR PEDIATRISTS AT STATE MEETING

There will be a dinner and meeting for members of the State Medical Society who are interested in the care and diseases of infants and children on Tuesday evening, May 16, during the annual meeting of the Illinois State Medical Society. The purpose of this meeting is to discuss the advisability of a Section on Pediatrics in the Illinois State Medical Society. Kindly communicate with Dr. John R. Vonachen, Peoria Life Building, Peoria, Illinois, to make your reservation. Price of the dinner will be very nominal.

NATIONAL HOSPITAL DAY MAY 12

Hospitals of the United States are completing plans for the celebration of thirteenth annual National Hospital Day on May 12, and the American Hospital Association, which is sponsoring this movement to make the public better informed as to service and problems of hospitals, expects some 3,000 hospitals to participate this year.

"Open house," inspection of certain departments, reunion of babies born in the institutions, reunion of former interns, public meetings at which talks on the value of hospitals and their current financial problems are presented, will be some of the features of programs of hospitals of Illinois and Chicago.

In some sections the cooperation of the auxiliaries of medical societies have been obtained to make the program

more interesting. This cooperation was formally offered on behalf of the auxillary of the A.M.A. at the New Orleans convention.

National Hospital Day is purely an educational movement. Donations or solicitation of funds are expressly forbidden on May 12 by the American Hospital Association.

AMERICAN CONGRESS OF PHYSICAL THERAPY

Mid-Western Section

Monday, May 15, 1933

Hotel Jefferson — Peoria, Illinois

Morning Session

9 o'clock

Frederick L. Wahrer, M.D., Chairman

1. "Types of Physical Exercise for the Prevention of Hernias in Men, and for Postoperative Treatment," J. C. Elsom, M.D., Associate Professor, Physical Therapy, University of Wisconsin Medical School, Madison, Wisconsin.

Discussion: F. H. Ewerhardt, M.D., St. Louis; Louis A. Bolling, M.D., South Bend, Indiana.

2. "On the Treatment of Flaccid Paralysis," F. H. Ewerhardt, M.D., Assistant Professor of Physical Therapeutics, Washington University School of Medicine, St. Louis.

Discussion: Philip Kreuscher, M.D., Chicago; John Stanley Coulter, M.D., Chicago.

3. "The Effect of Ultraviolet in Sacro-iliac Arthritis Associated with Sciatic Pain," Disraeli Kobak, M.D., Assistant Professor of Medicine, (Physical Therapy), Rush Medical College of the University of Chicago.

Discussion: Edwin L. Libbert, M.D., Lawrenceburg, Ind.; G. J. Warnshuis, M. D., Milwaukee.

4. "The Evaluation of Physical Measures in Arthritis," John Stanley Coulter, M.D., Assistant Professor of Physical Therapy, Northwestern University Medical School, Chicago.

Discussion: Philip Lewin, M.D., Chicago; H. D. Holman, M.D., Mason City, Ia.; D. E. Markson, M.D., Chicago.

5. "Presentation of a Simple Slide Rule Method of Measuring the Various Diameters of the Female Pelvis," John Stewart, M.D., Immanuel Hospital, Omaha.

Discussion: A. F. Tyler, M.D., Omaha.

Officers 1933

President

Gustav Kolischer, M.D., Chicago.

President-Elect

Albert F. Tyler, M. D., Omaha.

First Vice-President

William L. Clark, M.D., Philadelphia.

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Frederick B. Balmer, M.D., Chicago.

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John Stanley Coulter, M.D., Chicago.

Mid-Western Section

Frederick L. Wahrer, M.D., Marshalltown, Ia., Chairman

F. H. Ewerhardt, M.D., St. Louis, Secretary.

Afternoon Session

2 o'clock

F. H. Ewerhardt, M.D., Chairman

6. "Is Electrosurgery an Advance in Cancer Therapy?" Gustav Kolischer, M.D., President, American Congress of Physical Therapy; Senior Urologic Surgeon, Michael Reese and Mt. Sinai Hospitals, Chicago.

7. "Errors in Electrosurgery and their Safeguards (Lantern Slides)," Edwin N. Kime, M.D., Associate, Department of Medicine, Surgical Anatomy, Physical Therapeutics, Indiana University School of Medicine; Director, University Hospitals, Department Physical Medicine, Indianapolis, Ind.

8. "The Treatment of Cervicitis by Surgical Coagulation (Lantern Slides)." M. A. Roblee, M.D., Assistant in Clinical Obstetrics and Gynecology, Washington University School of Medicine, St. Louis.

Discussion of foregoing papers by: Disraeli Kobak, M.D., Chicago; A. David Willmoth, M.D., Louisville; J. M. James, M.D., Henning, Ill.

9. "Electrosurgery in Relation to the Tonsil Problem." Frederick L. Wahrer, M.D., Marshalltown, Ia., Otolaryngologist, Deaconess Hospital, Marshalltown, Ia.; and the Iowa Training School for Boys, Eldora, Ia.

Discussion: A. R. Hollender, M.D., Chicago; Frederick B. Balmer, M.D., Chicago.

10. "X-ray Examination of the Female Breast," A. F. Tyler, M.D., President-Elect American Congress of Physical Therapy; Professor of Clinical Radiology, Creighton University School of Medicine, Omaha.

Discussion: Harold Swanberg, M.D., Quincy, Ill.; D. S. Beilin, M.D., Chicago.

FIFTIETH ANNIVERSARY OF THE COLLEGE OF MEDICINE OF THE UNIVERSITY OF ILLINOIS

The College of Medicine of the University of Illinois is celebrating the Fiftieth Anniversary of the graduation of the first class from the Institution.

The Medical profession is cordially invited to attend the exercises.

The following program will be presented:

Wednesday, June 7, 1933

Alumni Clinics—Research and Educational Hospital

Departments of Surgery and Orthopedics

Room 1.

9:00-10:00—Urological Surgery Clinic
C. M. McKenna, M.D.

10:00-11:00—Chest Surgery Clinic
Carl A. Hedblom, M.D.

11:00-12:00—Orthopedic Surgery Clinic
H. B. Thomas, M.D.

Room 5.

9:00-11:00—Neurological Clinic
Eric Oldberg, M.D.

11:00-12:30—Dry Clinics
F. G. Dyas, M.D., C. H. Phifer, M.D., O. E. Nadeau, M.D., George DeTarnowsky, M.D.

Room 6.

9:00-10:00—Oral Surgery Clinic
L. W. Schultz, M.D.

10:00-11:00—Biliary Tract Surgery
C. B. Puestow, M.D.

11:00-12:00—Neck Surgery
R. B. Malcolm, M.D.

12:00-12:30—Chest Surgery
Willard Van Hazel, M.D.

(Most of the clinics will be operative)

Departments of Medicine, Dermatology and Otolaryngology

Room 106

2:00-2:15—Gastric Acidity: Use of Alcohol Test Meal.....Dr. M. H. Streicher

2:15-2:30—Treatment of Peptic Ulcer
Dr. Harry Singer

2:30-2:45—Arthritis Dr. I Pilot

2:45-3:00—Extraction of Teeth in Hemophiliacs
Drs. W. W. Dalitsch and Carroll L. Birch

3:00-3:15—Problems in the Treatment of Diabetes
Dr. R. W. Keeton

3:30-4:15—Presentation of Dermatological Cases
Drs. F. E. Senear, L. F. Weber and M. R. Caro

4:15-5:00—Otolaryngological Seminar
Dr. F. L. Lederer and Staff

Departments Pediatrics, Ophthalmology, Obstetrics and Gynecology

Thursday, June 8, 1933

Room 106.

9:00-10:00—Present Trends in Infant Feeding
Dr. Julius Hess

Hypothyroidism in Infancy and Childhood .....Dr. I. P. Bronstein

Anemias of Infancy and Early Childhood .....Dr. H. G. Poncher

10:00-11:00—Trachoma .....Dr. Hallard Beard

Treatment of Glaucoma
Dr. M. L. Polk

Treatment of Iritis
Dr. James W. Clark

11:00-12:00—Hormones in the Treatment of Menstrual Disturbances ....Dr. W. H. Browne

Sterility and Conception with Demonstration of Tubal Patency Test
Dr. F. L. Stone

Puerperal Sepsis with Special Reference to Serum Therapy
Dr. A. F. Lash

Obstetrical Anaesthesia
Dr. R. A. Scott

Ward Walk and Operative Clinics

10:00-12:00—Ward walks at Cook County Children's Hospital .....Drs. Irish and Blatt

10:00-12:00—Gynecological Plastic Operation
Interposition Operation
Dr. F. H. Falls

Room 1 and 2

Percy Cautery and Radium Insertion for Carcinoma of Cervix

Demonstration of Colposcope for Carcinoma of Cervix and Schiller Test for Cervical Carcinoma
Dr. H. O. Maryan

Demonstration of Sedimentation Test
Dr. M. H. Summerville

2:00—Alumni Clinics—Research and Educational Hospital,
Lecture Hall 106

3:00—Alumni Memorial Address by Colonel David L. Stone,
Lecture Hall 106

6:30—Alumni and Faculty Dinner, College of Medicine. Celebration of Fiftieth Anniversary of the graduation of the first class from the College. Reunions of classes. Ladies invited. Medinah-Michigan Club, Chicago.

AUXILIARY NEWS

State Convention News

May 16, 17, 18, 1933

Special Notice:—Both Tuesday, May 16, and Wednesday, May 17, are important Convention Days. All business meetings will convene prompty at the appointed time.

The meeting of the House of Delegates will take the place of the former Pre-Convention Board Meeting and the entire State Board of Directions and County Delegates are expected to attend.

All women attending this Convention, regardless of Auxiliary membership are invited to participate in the entire program and a warm welcome will be extended to wives of Peoria Physicians.

Cook County: Central Branch—Mrs. A. H. Brumback, President (also 1st Vice President of the State Auxiliary) addressed the radio audience over Station WGN April 11th at 11:50 A. M. Her subject was "The Old-Time Doctor." Mrs. Brumback is especially qualified to talk on this subject as she is an M. D. All those who heard this radio talk and appreciated it please write to the Chicago Medical Society, Educational Department.

The Central Branch has invited members of the Wisconsin State Auxiliary to attend their annual meeting to be held May 24th at the Stevens Hotel, Chicago.

Jackson Park Branch—On April 19th at a regular meeting of this auxiliary, Dr. R. K. Packard talked on "Medical Economics." Dr. Packard has made an intensive study of this subject and the ladies considered it a great privilege to have him make this splendid talk, particularly inasmuch as the Program Committee of the State Auxiliary have sent out Dr. Packard's paper on "Medical Economics," as a study program.

Aux Plaines—This auxiliary which meets regularly at the Oak Park Club has had unusual programs all year. March 24th Dr. Alexander Hershfield spoke on—"What is being done for the Mental Health of the Youth of Chicago." On April 21 Mr. Clark Eichelberger of the League of Nations Association will talk on "International Relations of Germany and Central Europe." Splendid programs of wide variety are a great stimulation to good attendance, and no doubt this is one of the reasons why the Aux Plaines Auxiliary is such an outstanding success.

Marion County: Mrs. E. W. Mueller. President of

the State Auxiliary visited this auxiliary when they held their meeting in Centralia, March 24th at the Langenfeld Hotel. Mrs. Mueller's talk covered the work of committee chairmen, and activities being carried on by other auxiliaries throughout the state. Mrs. W. H. Hamilton invited the Auxiliary to hold their May meeting at her home in Odin.

St. Clair County: April meeting held in East St. Louis, program in charge of Mrs. J. S. Waldman of Belleville, consisted of Music and book review by Mrs. George Niecc. Following meeting the ladies joined the doctors in the auditorium of the hospital.

The March meeting was in charge of Mrs. I. L. Foulon who presented Miss Audrey Hayden, Secretary of Illinois Society for Prevention of Blindness.

Vermilion County: Twenty-five members attended the monthly dinner and meeting of this auxiliary at the Holland, Danville, April 4th. Mrs. O. W. Michael, President and Mrs. E. B. Coolley elected delegates to the State Convention in Peoria. Program consisted of paper on periodical health examinations written by Mrs. S. M. Hubbard, and films—"Working for Dear Life," "Drinking Health" and "Home-Run Bill."

The March meeting of this auxiliary was held at home of Dr. and Mrs. J. W. Moore, and was in the nature of an indoor picnic and buffet dinner. Mrs. B. M. Jewell the retiring president in charge of meeting presented Miss Campbell, of the Society for the Prevention of Blindness who talked on House Bill 161.

Mrs. F. P. Hammond, Chairman
Press & Publicity

MILWAUKEE INVITES THE WOMAN'S AUXILIARY

When you come to Milwaukee June 12-16 to attend the annual convention of the Woman's Auxiliary to the American Medical Association, you will find a store of pleasures awaiting you. First of all the program, as arranged by the local committees under the chairmanship of Mrs. Rock Sleyster, is completely arranged for your pleasure and entertainment; and secondly, the city of Milwaukee is such a friendly and hospitable metropolis that the combination will leave a pleasant impression upon your memory.

Milwaukee is situated on the western shore of Lake Michigan, the largest fresh water lake in the country. Today Milwaukee ranks the twelfth largest city in the United States with a population of approximately 800,000.

Be sure to avail yourselves of the privileges which Milwaukee women will afford you to see the many lovely parks and the surprisingly beautiful residential districts.

Down town you will find the hotels modern and clean, and convenient to all convention activities as well as to the shops and tea-rooms. The New Pfister Hotel, ("new" because it has been remodeled recently) is an old and famous hostelry where many of our country's presidents have stayed while in Milwaukee. You will particularly enjoy the noted and extremely valuable art collection on the mezzanine floor. This hotel as you know, will be our Auxiliary Headquarters.

There is another important reason for your coming to Milwaukee this year. Chicago with its great World's Fair "The Century of Progress" is only eighty miles away or two short hours by bus, train, or electric. When ever before was it possible to make two such interesting and valuable trips in one?

Not only the doctors and doctors' wives but all of Milwaukee will welcome you most heartily when you come in June. Already the most minute plans for your pleasures and comforts are being made, and if you have any suggestions as to some particular service which you think our guests would appreciate, just drop a note with the suggestion to the General Convention Chairman, Mrs. Rock Sleyster, 1220 Dewey Avenue, Wauwatosa, Wisconsin, and she will see that your wish is carried out if it is in any way possible.

WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

Eleventh Annual Meeting

MILWAUKEE

June 12-16, 1933

HEADQUARTERS: Hotel Pfister, Milwaukee, Wisconsin

PRELIMINARY PROGRAM

Monday, June 12, 1933

12:30 P. M. Luncheon at College Woman's Club in Honor of Past Presidents, followed by National Board Meeting and visit to American Medical Association Exhibits at Auditorium. Tickets $1.00.

7:00 P. M. Dinner for National Board, Delegates, and wives of Officers and Delegates of the American Medical Association at Woman's Club of Wisconsin. Musical Program furnished by Artist Members of Auxiliary to Medical Society of Milwaukee County. Tickets $1.25.

Tuesday, June 13, 1933

9:00 A. M. General Meeting, Roof Room, Hotel Pfister, Mrs. James Percy, *Presiding.*

12:30 P. M. Luncheon and Bridge at the Wisconsin Club. Tickets $1.25.

2:00 P. M. *Attractions available for those not wishing to play Bridge are Layton Art Gallery, Milwaukee Art Institute, Milwaukee Museum, Curative Work Shop and Vocational School, or—

*Bus Trip to County Institutions, Milwaukee Children's Hospital Convalescent Home, and Washington Park Zoo.

8:00 P. M. General Meeting of American Medical Association.

10:00 P. M. Informal Dance at Wisconsin Club Courtesy of State Medical Society of Wisconsin. Hostesses: Woman's Auxiliary to the State Medical Society of Wisconsin.

Wednesday, June 14, 1933

9:00 A. M. General Meeting, Roof Room, Hotel Pfister, Mrs. James Percy, *Presiding.*

12:30 P. M. Auxiliary Luncheon, Fern Room, Hotel Pfister, Toastmistress.....Guests and Speakers from the American Medical Association. Musical Program. Tickets $1.00.

4:00 P. M. *Teas in Private Residences.
8:30 P. M. Light Opera..... Tickets $1.00.
9.00 A. M. General Meeting, Roof Room, Hotel Pfister, Mrs. James Blake, *Presiding.*
12:30 P. M. Buffet Luncheon, Crystal Room, Hotel Pfister. Tickets 75c. or
12:00 Noon Trip to Oconomowoc Lake District, Luncheon 12:30 P. M., Carnation Milk Plant, Oconomowoc, Wisconsin, Transportation, and Luncheon Courtesy of Carnation Milk Company.
2:00 P. M. *Sightseeing Tour of Milwaukee.
6:30 P. M. "Bring Your Husband" Dinner, Fern Room, Hotel Pfister, International-House-Cabaret, Tickets $1.50.
9:00 P. M. President's Reception and Ball, Schroeder Hotel. Hosts: The American Medical Association.

Friday, June 16, 1933

10:00 A. M. Golf Tournament.

All trips start from Hotel Pfister
*Bus transportation to be paid by individuals.

Mrs. Rock Sleyster, General Chairman
Mrs. William Liefert, Chairman Hotel Committee,
4103 North Murray Avenue,
Milwaukee, Wisconsin

All women attending this Convention whether Auxiliary members or not are invited to participate in this entire program.

"THE HEBREW PHYSICIAN"

The third issue of *"The Hebrew Physician"* (Harofeh Hoibri), the only Hebrew Medical Journal published outside of Palestine, edited by Dr. Moses Einhorn, has just made its appearance.

This issue consists of 168 pages, and is larger and more elaborate than the previous editions. Besides numerous articles on general medical subjects, there are three additional divisions: a special section on Health in Palestine by Dr. H. Yassky, medical director of the Hadassah hospitals; a section on Talmud and Medicine, and an interesting section devoted to Hebrew Medical Terminology, which will be of great service to the future medical department of the Hebrew University.

All physicians who are interested in this journal, are requested to communicate with The Hebrew Physician, 983 Park Avenue, New York City.

Program For Medical Women's Day

May 16, 1933

Morning Session, 10:00 A. M.

Marion K. Bowles, M.D., Joliet, Presiding

Presentation—John R. Neal, M.D., Springfield—President, Illinois State Medical Society.

Lay Group Outlines for Public Health Work:

1. Illinois Federation of Women's Clubs—Lena K. Sadler, M.D., Chicago—State Chairman.

2. Illinois Congress of Parents and Teachers—Mrs. C. W. Balch, Chicago—Fifth Vice-President, Department of Health and Home Service.

"Health as an individual responsibility, personal health, school health and community health are emphasized as meaning a healthy state and nation. The million and one-half members of this gigantic organization are working through home and school to give every American child health and happiness. Two important activities of Illinois Congress are Child Hygiene education and the Summer Round-Up campaigns."

A Medical Society and Its Service to the Public—Miss Jean McArthur, Chicago, Secretary Educational Committee, Illinois State Medical Society.

"The Educational Committee of the Illinois State Medical Society serves as a clearing house for important medical and health questions and exists for the purpose of bringing authentic health information to lay groups in the state. Every contact made by the individual physician enables the Committee to enlarge the scope of its work and develops better feeling between organized medicine and the laity. Physicians should guide and direct the health activities of their local organizations and communities."

How The Public Health Nurse Works With the Profession—Miss Louise Nicol, State Department of Public Health, Peoria.

"The subject will be presented from the viewpoint of the importance of team-work between the two professions, need for mutual understanding of the scope of Public Health Nursing, factors that determine the nurse's responsibilities in her work, avenues through which the nurse looks for guidance and leadership from the Medical Profession, i. e., medical advisory committee and local organization for the promotion of approved plans and programs."

1:00 o'clock—General Opening Meeting.

Afternoon Session, 3:00 to 5:00 o'Clock

Harriett M. Daniel Graves, M.D., Murphysboro, Presiding.

Teaching the Lay Audience Diphtheria Immunization—Elizabeth D. Ball, M.D., State Department of Public Health, Springfield.

"High points in the history of the disease, its prevalence and mortality then and now; age and seasonal incidence; antitoxin, a treatment measure, then toxin-antitoxin, and now toxoid; some explanation of the procedure; lack of danger; percentage immunized; Schick Test."

Opportunities in Preventive Medicine for the Woman Doctor as Seen by a State Health Officer—Grace S. Wightman, M.D., Chief, Child Hygiene Division, State Department of Health. Springfield.

"A brief history and analysis of the health programs of the great lay organizations, why they developed,

their objectives, their general educative influences, their relationship to and influence on the practice of medicine, creating a public desiring preventive measures. A brief discussion of opportunities in preventive practice from prenatal care, supervision of child growth and development, school health, and adolescent and his problems."

What I Would Tell Lay Audiences Regarding Prenatal Care—Esther Smucker, M.D., Tiskilwa.

"Necessity for prenatal care for yearly preventable deaths of mothers and babies, to protect best interests of mothers, to insure good birth-right of child. Go see your doctor and your dentist for examination and information concerning individual responsibilities."

Health Audits—Alice Conklin, M.D., Chicago.

"Let us stand for one hundred per cent health audits for better health, for more perfect children, for Illinois the healthiest state in the Union."

Teaching Sex Hygiene to Children in the Home—Mabel Howe Otis, M.D., Moline.

Social Diseases—Caroline MacDonald, M.D., Chicago.

Round Table Discussion.

Evening Session, 8:00 o'Clock

Margaret B. Meloy, M.D., Peoria—Presiding.

Century of Progress in Health—Bertha VanHoosen, M.D., Chicago.

My Experiences With Women's Clubs—Harriet Day Chandler, M.D., Decatur.

"Club women have fine motives, are a great source of education of the children who carry their ideas of hygiene and proper living conditions to other homes. The comparatively small number of women who take active part in club and school work are thus sending to hundreds of homes, children who may spread their hygienic ideas among ignorant parents. Club women take active interest in all projects concerning health both of adults and of children, and their work should be guided and made practical."

Mental Hygiene—Lena K. Sadler, M.D., Chicago.

CLINCHING THE DIAGNOSIS

The eminent alienist recognized the thug who was holding him up.

"Look here," he protested, "I'm your benefactor. Don't you recall that I once saved you from a life sentence by proving you crazy?"

"Sure, I remember you now," the thug said as he continued his work. "And ain't holding up your benefactor a crazy thing to do?"

—*Boston Transcript.*

Correspondence

ILLINOIS NEEDS MORE JUDGE MILLERS

Chicago, Ill., April 26, 1933

To The Editor: The domain of the legitimate practice of medicine is invaded constantly by a never-ending horde of impostors, fakirs, faithcurists, half-cracked zealots, and charlatans of every kind, character and description. Newspaper advertisements that scare the uninformed flame out with circus-poster announcements. Radios nightly screech out into space the alleged virtues of this, that and the other nostrum. All of this nefariousness is thriving and feasting upon the credulity of mankind, a credulity of which the depths have never been plumbed. One of the newer methods of exploiting the sick, the scared sick and the imagined sick, is by means of a corporation organized for the practice of medicine, and seemingly determined to advertise this to the winds.

When it is remembered that any three adult citizens of the United States, only one of whom must be a citizen of Illinois, may form a corporation. When it is further remembered that these three citizens are not required to possess any educational prerequisites whatsoever, and even need not be able to read or write, one is led to wonder why such a crime against the public as permitting a corporation to traffic in human life could possibly be tolerated, let alone permitted to use even the ether to distribute its lying claims.

Organized medicine for the past dozen years and longer has persistently endeavored through appropriate legislation to restrict the treatment of the sick and the suffering to properly qualified physicians. Unfortunately the legislature has not seen fit to act along these lines. The general assembly is dominated by lawyers and seems not only to have exhausted itself in giving protection to the public against the practice of law by corporations, but willing to permit any corporation a free hand in preying upon the citizens of this commonwealth in the treatment of the sick—particularly in bleeding those who can be scared by newspaper advertisements into thinking they have some dreadful disease, or fearful complication.

Illinois has on its statute books a competent medical practice act: Well draughted and provisioned to begin with.

The Medical Practice Act of Illinois seems to

grow better and stronger with age. Recently Judge Charles H. Miller of Benton, Illinois, sitting in the Superior Court of Cook County, handed down a decision of the very greatest importance to the people of the state of Illinois.

A Quo Warranto action to determine the legality of the practice of medicine by a corporation was heard by Judge Miller.

Judge Miller listened to extensive arguments of both sides and after due deliberation ruled that a corporation cannot qualify to treat the sick nor can a corporation practice medicine through licensed physicians in its employ.

The outstanding feature of Judge Miller's decision is not so much that the medical practice act is once more upheld—any lawyer not in the pay of a corporation will readily say that the decision is just and right but the outstanding feature of the decision is the display of conspicuous courage in making it. Illinois needs more Judge Millers.

Charles E. Humiston, M.D.

ETHICAL ADVERTISING

"Solicitation of patients by physicians as individuals, or collectively in groups by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications is unprofessional." Thus reads the Code of Medical Ethics. The word Ethics reflecting the standard dictionary definition as "the sources, principles, sanctions and ideals of human conduct." The infraction of this code is responsible for all the recent disturbances in the Chicago Medical Society. This, rather than the charge that men were trying to lower the cost of medical care to benefit the low income group.

The claim that publicity is necessary to attract the low income group is especially evasive and sophistical. The low income group has never been denied medical attention whenever or wherever it was desired or necessary. The claim offered is a form of protective coloration founded on selfishness rather than beneficence.

The pretense that men have been dismissed from organized medicine on account of their high and lofty desire to reduce the cost of medical care to the indigent and low income group is as specious as it is fallacious. The men who make these declarations have never shown any inclination to reduce their own fees but have risen to wealth and independence through newspaper exploitation at the expense of their brethren. The support they receive from the public press is due either to ignorance, intentional blindness or a flagrant commercialism.

If anything for public good can be developed out of advertising it will be worked out in time by the profession with scientific thoroughness rather than by heedless self seekers aided by the hue and cry of mercenary journalism.

The science of Medicine grows by carefully tested extensions and not by erratic emotionalism. To profess a new and absorbing interest in the low income group is, if not factitious, a self deception devised to justify the predetermined publicity and the concurrent violation of professional faith. Such assertions come from men who have been demoted from medical standards by commercial ambition, the desire for public notice, the beguilement of Mephistophelian outcasts or by an incomprehensible stupidity. The credulity of dupes is as inexhaustible as the duplicity of rogues.

Such mental infirmity is not idealistic nor in the least degree judicious. If, for any of the reasons given, some one resolves to advertise his wares, a sense of decency and good sportsmanship would suggest that he sever his relation to organized medicine deliberately and unreservedly before embarking on his piratical adventure.

It is inconceivable that a rational being could expect to enjoy the benefits, the emoluments and the distinction of brotherhood in organized medicine and at the same time the profits which might accrue from repudiation of professional tenets and principles. A sensitive conscientious man would be unwilling to live even temporarily under such a contradiction in the proprieties.

The rules and regulations in the Code of Ethics were adopted to protect the public from exploitation by charlatans and to preserve the integrity, punctiliousness and sacred honor of the Medical profession and not as a smoke screen behind which those who claim its privileges could stultify themselves and conspire in safety to betray their colleagues and destroy the fruits of their laborious altruism.

Public Relations Committee,
Chicago Medical Society.
Charles B. Reed, Secretary.

COMPARATIVE COST OF MEDICINES UNDER PROPRIETARY AND CHEMICAL NAMES

To The Editor:

Your editorial under title of "Comparative Cost of Medicines Under Proprietary and Chemical Names," August issue, 1932, interested me very much and prompted the writing of the enclosed remarks, which I offer you for publication in your journal, with your approval.

Having been with pharmaceutical and chemical houses in the past I know some of "the tricks of the trade," along with the "Why of the proprietary." It is simply a case of "money talks."

Before the patent on antipyrine expired it was a wonderful febrifuge and pain destroyer, according to the makers thereof. Today they are offering us an improved (?) product, pyramidon, under patent of course, which they say is superior to their previous product. Again of course, the price of pyramidon is much higher than that of antipyrine, a thing all the chemical houses are listing at a price much lower than was in existence during the life of the patent.

You could have gone much farther than you did with your list, for since the war and the expiration of the German U. S. patents our own chemists are making many of the old time German dye house synthetics and at a much lower price than during pre-war times and that in spite of the general inflation of prices up to October 1929.

You will notice that I made but one specific allusion to any particular item, that of antifebrin, but it has been off the market as such for so many years that I doubt if what I have said will be questioned.

I have never been able to figure out why certain arsenical salts, the arsphenamins should be so high priced, when the basic crudes are rather cheap, some of them decidedly so. I asked a detail why arsenic which could be bought for a few cents per pound should become so expensive when it appeared as arsphenamin and his reply was that the manufacture was costly and that certain batches had to be discarded because they failed to come up to standard. Take the hexylresorcinol products as another example of high prices. As a simple chemical no doubt the cost is not excessive, but mixed with a little olive oil and put in capsules it costs the patient about ten cents for each individual capsule. If combined with glycerine and water, under a more or less fancy name, it seems to me the price asked is decidedly high. No wonder the high cost of medical care. Today there may be one or two ethical concerns making our remedial products, but most of them are after big profits and so the why of the proprietary or patented specialty.

P.O. Box 707

Yours very truly,

George L. Servoss, M.D.

NEW RULES REDUCE QUARANTINE FOR SCARLET FEVER

Effective June 25, 1932, a new set of quarantine regulations concerning scarlet fever which shorten by one week the period of quarantine for uncomplicated cases and which make laboratory tests for the first time in this State a requirement for the release of complicated cases of scarlet fever was adopted by the State Department of Public Health. Uncomplicated scarlet fever patients who show evidence of complete recovery may now be released from quarantine at the end of 21 instead of 28 days upon recommendation of the physician in charge.

Patients who develop complications, however, must remain in quarantined isolation for at least 28 days and may then be released only when two successive laboratory tests, made one week apart, indicate a freedom from hemolytic streptococci, the germ which causes scarlet fever, and the physician in charge reports complete recovery.

Food handlers and teachers who reside on premises quarantined for scarlet fever must be disinfected, move away from the quarantined premises, stay away from their work for at least one week and then by medical examination show a clean bill of health before they are allowed to return to their usual employment under the new rules. These people must remain completely away from the premises until after quarantine is terminated.

All scarlet fever patients, whether complications arise or not, are prohibited from attending school or joining public gatherings until one week after release from quarantine.

The new regulations are based upon recent studies which indicate that scarlet fever patients who suffer from complications are far more apt to become a source of infection to others than are uncomplicated cases.

With an average of more than 15,000 cases per annum in Illinois during recent years, the majority of which are uncomplicated, it is apparent that the new rules will reduce the volume of isolated quarantine by an aggregate of several hundred years per annum.

Original Articles

MEDICAL ECONOMICS AND MENTAL DISORDERS

JAMES H. HUTTON, M.D.
CHICAGO

Medical economics is now one of the most widely and fervently discussed topics among the profession. The gist of these discussions is that most doctors are not doing well financially, that there are too many of them, that the medical schools are annually increasing that number and that medical schools and various foundations are in unfair competition with their own graduates and the rest of the profession—all of which is probably true. One rarely hears that the practice of medicine and the diseased conditions the doctor is called upon to treat have greatly changed in the last fifty years and are undergoing still further change. Conditions that formerly kept the doctor busy at certain seasons have almost or entirely disappeared. Yellow fever, cholera, smallpox, typhoid, malaria are curiosities. While smallpox is more plentiful in Illinois than in almost any other area of equal size on the globe, yet many doctors have never seen a case of it. Diphtheria has decreased to a point of no economic importance. Scarlet fever will doubtless shortly follow in its wake. The average medical man today sees less than a half dozen cases of pneumonia per year.

Much ado is made about the increased number of deaths due to heart disease. This appears to be a fact and not a fantasy, though part of it may be due to better diagnoses. The medical profession has contributed in a large measure to this increase. The span of life is longer than in former years and as a consequence more people reach the age where they become victims of heart disease instead of dying in infancy. The only other evident factor is an increase in the incidence of rheumatic fever.

The medical profession is responsible for the disappearance of these diseases and the consequent removal of a considerable factor in its own income. This was part of the profession's public duty. It has done it well and has no regrets; as a matter of fact, nothing but pride in the accomplishment.

But the increased incidence of mental disorders is so great and so rapid that there is no matter of doubt or dispute about it. About one-fifth of all the hospital beds in the United States are occupied by victims of dementia praecox. Mental disease is by far the most prevalent disease in the United States today if we exclude endocrine dyscrasias, and the two —that is, endocrine dyscrasia and mental disease—occur in the same patient too often to be a matter of coincidence.

There are comparatively few men interested in mental disorders or their treatment. State medicine almost completely controls this field. The number of cases cared for by private practitioners is negligible, in comparison with the entire number. In Illinois the number of beds devoted to mental disorders increased by 5,000 from 1929 to 1932. The population of hospitals for the insane and feeble-minded in Illinois now numbers about 23,000, and more space and more beds are already needed. For every case confined to a hospital there are probably half a dozen at large. The family doctor, the much lamented general practitioner, sees these cases first and is in the best position to give them preventive and curative treatment, but he takes little or no interest. The mild forms of mental disorder he fails to recognize. They may be "queer," "have a bad disposition," or be "hard to get along with," but nothing is done about it until they come into collision with some of society's inhibitions. If this collision is sufficiently violent or frequently repeated, they are hailed before a judge, a trial is held, they are adjudged insane (whatever that may mean and in Illinois nobody knows what it does mean) and committed to an "insane asylum." The doctor has little interest in what happens to them after that.

Until a very few years ago patients committed to the hospitals for the insane were given only custodial care. The State of Illinois provided a large pen containing a few buildings with an inadequate number of beds, a very few doctors and a few more attendants, so that the care could not possibly be anything but custodial. The syphilitic population was given a little treatment, but little or nothing was done in the way of treatment to most of the population except to take care of medical or surgical emergencies. This was not the fault of the medical staff which was hopelessly inadequate numerically. It was the fault of the

politicians for not providing an adequate number of doctors.

Conditions in our state hospitals have improved. This improvement has been particularly marked in the last four years under the regime of Mr. Rodney Brandon as Director of the Department of Public Welfare. The managing officers have been given a more numerous staff. Definite study is being made of some cases, and a great effort is being made to find out if any curative treatment can be administered and if this same treatment may not be passed on to the family doctor in the hope that it may be administered in a preventive way and thus the increasing rate of admissions to state hospitals be checked at its source.

If the present rate of increase continues we who are not mentally deranged will shortly be working to support those who are. In Illinois about 43 cents out of every dollar of state taxes is spent in caring for the mental and moral misfits and most of the latter are victims of mental disorders. Something over fifteen million dollars is being spent annually in their care.

In former years medical schools gave this matter next to no attention; so far as I know, this may still be true. There were a few lectures on psychiatry which were something to be gotten through with. We expected to learn little or nothing from them and usually were not disappointed. We were interested in the gall bladder or in some other major surgical procedure where blood flowed freely, or in some unusual condition in the chest where we could hear unusual sounds made by the heart or breathing apparatus of the patient. There has been comparatively little change in this attitude. Even now when doctors are crying to high heaven that they have little or nothing to do, when conditions from which they formerly made a living have all but disappeared, they still pay no attention to those diseased conditions which are so very prevalent that they constitute a menace to society. The doctor chooses to starve in the midst of plenty. We complain of overproduction and unwise and unfair competition just as big business complains of the same conditions. Apparently little thought is given to the possibility of enlarging our market by studying more intensively the question of the diagnosis and treatment of mental diseases.

Medical societies do not study the question of mental disease. If a psychiatrist is billed to talk before a medical society he it apt to address empty benches. The reason is not entirely the fault of the doctor. For the most part the psychiatrist speaks a language of his own that the ordinary medical man does not understand any better than if the psychiatrist spoke Sanskrit. Some years ago I discussed this with a very high-grade secretary of a county medical society. He said that they would be glad to have a psychiatrist talk to their group, but it would do no good. After the first half dozen sentences none of their members would know what the psychiatrist was talking about, and when he finished the net result would be some badly disturbed naps on the part of most of the members. I recounted this conversation to a man who had had considerable training in psychiatry. He said the county secretary was absolutely right but very conservative, that if half a dozen psychiatrists got together they wouldn't understand each other. This is no longer true in Illinois. There are now a number of our members who are trained in psychiatry and who are qualified to discuss mental diseases and disorders in a language that the ordinary doctor understands; —but they are rarely called upon to do it.

Men who have been out of school as long as ten years were trained in the days of cellular pathology. The disease had to be associated with something we could see or hear or taste or smell; it had to be something serious or it was beneath our dignity. It is only within the last five years that a patient with nothing ostensibly wrong with him could approach a doctor and ask for a physical examination without some danger of being embarrassed. He was apt to be slapped on the back, told that he was all right, to run along and not bother the doctor until he really got something wrong with him. I have known patients to travel twenty miles for a periodic physical examination because they were afraid to approach their family doctor. We are now becoming aware that there are many functional disorders and that manifestations of disturbed function occur long before any change in structure advances to the point where it can be

recognized either grossly or under the microscope. These functional disorders are worthy of serious attention. Our failure to heed them is not only short-sighted but stupid even from a selfish standpoint.

Well qualified psychiatrists estimate that more than half the mental diseases are on a physical basis—heredity, alcoholism, syphilis, arteriosclerosis, infections, brain tumors, and endocrine disturbances. If the doctor knows nothing about psychiatry, he can at least give these folks the benefit of a searching physical and laboratory examination to be sure that they are not the victims of some physical ailment with which the doctor is familiar and which he is entirely competent to treat.

A few of the things for the average man to think of are that: One of the ex-presidents of the A. M. A. developed an acute psychosis which was finally found to be due to bad teeth, the removal of which cured his mental disorder and restored him to social and professional competency. Many cases of Graves' disease are associated with a psychosis. Every practitioner of any experience is familiar with the mental and emotional changes that occur in many women at the menopause. Frontal lobe tumors are associated many times with a change in disposition and personality. The combination of thyroid and pituitary deficiency many times is associated with a somnolence which amounts to complete incapacity. Milder degrees are associated with lesser manifestations of that sort.

Endocrine disorders should be suspected—if the doctor is not qualified to recognize them absolutely—by the presence of goiter, menstrual disorders, an excessive hair growth on body or extremities, malplaced teeth of poor quality, an abnormal dryness of the skin and brittleness of the nails, a height obviously outside normal limits, overweight.

The Illinois State Medical Society should have a close contact with the Department of Public Welfare. An effort should be made to make the various state hospitals educational and research centers—research as to the cause and treatment of mental disorders; educational in that they should keep the practitioners of their areas informed as to the latest advances which might be of interest or value to the man in general practice. This could be done either by reports of their own work in the literature or by district meetings held two or three times a year in these institutions. At these meetings work done there and research work done elsewhere could be reported. Typical cases could be shown so that the man in private practice might acquire a post-graduate education along this line. Dr. Read at Elgin and Dr. Murray at Dixon have already done something along this line. They should have our appreciation and such of our cooperation as they desire to increase their services.

The common notion that these things are not interesting to the average doctor is probably erroneous. When the American College of Physicians met at Baltimore, the Psychiatric Clinic was the most popular one in the city. It was crowded at every session. Not only were all the seats taken but also the available standing room was occupied.

There is great danger that if the medical profession does not take a more lively interest in this field the lay psychologist will move in and take it over entirely, and another field that legitimately belongs to the doctor will be forever closed to him. This would be disastrous in two directions: first to the patients and second to the profession. It seems to me that the profession is not only short-sighted on its own account but is also failing to discharge a public duty when it does not make an intensive study of mental disorders and their treatment.

WANTED INSURANCE BUT—

A man who had been living a life that was, to put it mildly, a little irregular, wanted to have his life insured, and applied to a friend, an agent for a prominent company, for a policy. The agent sent the company's physician to examine the applicant, and that was the last he heard of it for some time.

Meeting his friend on the street, he said: "Say, George, how about that life insurance of mine? Don't I get it?"

"Well," said the agent, "you know, in our company it is the custom for the physician, after he examines a man, to take a chart of the human body, and he punches a hole in it wherever he finds anything wrong."

"Oh, is that so, George? Did the doctor do that in my case?"

"He sure did; and he took the chart home and put it on his player-piano, and he played 'Nearer My God to Thee.'"

—*Wall Street Journal.*

HEALTH EDUCATION OVER THE RADIO*

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Ether, when used for the transmission of health education, is not intended as an anesthetic. Nevertheless, if not tuned out first, certain health talks may have precisely that effect.

The radio, being a relatively new instrument for the transmission of information, has all the allure of novelty. Much has been said about the millions in the unseen audience; attractive pictures have been painted of breathless multitudes hanging upon every word of the speaker. No inventive genius has ever devised any kind of a gadget which would cause a red light to flash and a bell to ring in the studio every time a listener, with exclamations of disgust, tuned out the program for something less deadly. An evaluation of the radio as an instrument for health education has, therefore, been based in many instances on hopes rather than facts, flattering beliefs instead of demonstrable actualities.

There was a time in the early days of radio when a program could be evaluated by the so-called applause cards. These cards were widely distributed free and listeners were urged to send one in for the programs which they particularly fancied. Various estimates were made from time to time as to how many listeners, on the average, were represented by each card. These varied from extravant guesses of 10,000 per response down to approximately 250. The number of "fan" letters has diminished as radio has metamorphosed from a novelty to a commonplace, until at the present time a radio program does not usually get a response unless some inducement is offered in the form of a gift, or unless the program is of such outstanding character that it produces in its listeners a definite reaction either of enthusiasm or antagonism and a correspondingly strong impulse to give expression to the feelings aroused.

As advertisers using the radio have been compelled to pay more or less high rates for radio time and in consequence have wished to know what results, if any, they were getting from their expenditures, studies have been made[1] of the radio situation from the advertisers' standpoint. Many of the facts evolved will be of interest both to the health educator and the listener.

The first consideration is the radio audience. It was estimated that in 1922 there were but 60,000 radio sets in the United States which, at the beginning of 1933, had increased to approximately 17 million. There is evidence that as a result of depression radio sets have been allowed to go out of use due to lack of repair and the inability to purchase parts and that many worn-out sets have not been replaced.[2] It is, consequently, difficult at the present time to estimate the number of radio sets, but it would seem fairly safe to assume that two-thirds or more of the families in the United States have radio sets in working order.

It is necessary to go farther into the study of the radio audience and ascertain if possible, the approximate percentage of radio sets in various population groups. According to an estimate of April 1, 1926[3] the largest percentage of families with radio sets was to be found in the smaller cities, with 41 per cent, followed by larger cities, with 37 per cent, rural towns, with 32 per cent, and farms, with 29 per cent. These percentages must be higher now despite depression. At the time the estimate was made, most of these families were reported to have owned their sets less than two years, and in consequence, each receiver was more or less of a novelty.

Another factor in connection with the radio audience is the habit of using the radio. In the same estimate above quoted[3] over 80 per cent of the families interviewed said they were in the habit of using their sets daily, the majority tuning in between the hours of 7 and 11 P.M., while the maximum audience was developed between 8 and 10. The noon hour, from 12 to 1, and the dinner or supper hour, from 6 to 7, were nearly equal in number of listeners. From noon until 2 P. M. seemed to be a popular listening time with farmers. Eighty-four per cent of the radio families, it was reported, indicated that the entire family usually listened. About 75 per cent of the total number of families had one or two favorite stations. One-fifth were fond of getting distant stations, which is one of the characteristics of a new radio listen-

*Read before the Chicago Medical Society, Dec. 7, 1932.

er. Over 73 per cent reported that they tuned in practically every evening, while those who had a preference for certain evenings indicated Saturday and Sunday as the most popular. Even in the summertime, over 78 per cent of the radio-owning families used their radio sets. About four out of five had definite preference as to programs and about three-fourths of them had favorite stations. The implications for the program planner of facts like the above will readily be apparent.

That the percentage of homes with radio is now much greater than in 1928, can be affirmed by your speaker who, while sponsoring a Health Department radio program in another city caused a house-to-house canvass to be made on two occasions of approximately 500 homes. The first study disclosed that 24 per cent of families questioned had no radios and 76 per cent had. This was in May, 1931. Six months later the homes with radio, in a parallel survey, had declined to 58 per cent, explanation being offered by many that they had been forced to allow their radios to remain out of repair, or had lost those being purchased on installments, as the result of unemployment.[4] Further facts from the same survey indicated that of these with radio, about 43 per cent were in the habit of listening to the program in question, while 57 were not. The exceptionally high percentage of those listening will be discussed in another connection.

At the very best, our knowledge of the radio audience must be based largely on conjecture, but we can be much more definite about the radio program.

As we think of the health programs represented on the air we find that they may be classified roughly as follows:

(a) Programs sponsored by organized medicine. (b) Programs sponsored by organized health agencies, either official or volunteer. (c) Programs sponsored by commercial organizations. (d) Programs sponsored by health cults, quacks and faddists. (e) Various combinations of the preceding types.

Each of the first four groups has more or less definite characteristics. The programs sponsored by organized medicine are characterized by a sincere effort to give to the public only well-established facts concerning their health and of these only such as may be useful to the layman and subject as little as possible to misinterpretation. The programs are prepared by well qualified writers and in most instances edited by committees, being thus very carefully safe-guarded.

We do not know precisely at a given date, to what extent the medical profession is utilizing the radio as a means of public health education. In 1931 the Bureau of Health and Public Instruction sent a questionnaire to the secretaries of the state, district and county medical societies composing the American Medical Association. The questionnaires sent out numbered 2044; the answers received, a little more than 50 per cent. While it may be assumed that most of those who did not answer were not doing much in the way of public instruction, there were notable exceptions. When we made a map, based on the 1931 questionnaire, and exhibited the same at New Orleans, 11 omissions were called to our attention. Happily for us, investigation of our questionnaire file showed that none of the societies whose activities had been omitted from the map had responded to our questionnaire.

Since this questionnaire was received and compiled there have undoubtedly been changes. Some societies may have ceased broadcasting and others, possibly, have taken it up, but in general it may be said that approximately 40 county medical societies in the United States are now engaging in regularly scheduled broadcasts at definite intervals, usually once a week, though sometimes oftener. In addition, 100 societies, more or less, are engaged in occasional broadcasts, some of these being emergency programs during times of epidemic or concentrated short time efforts in connection with campaigns for early diagnosis of tuberculosis, pre-school round-ups, vaccination and diphtheria prevention, periodic physical examination drives and miscellaneous health projects. In other words, about 16 per cent of the county societies answering the questionnaire are using the radio.

The broadcasting, as might be expected, is distributed more or less in conformity with relative density of population and the country is fairly well covered with broadcasts by the profession entirely aside from those by state and city health departments and voluntary health organizations, and also leaving out of

consideration the chain program of the American Medical Association, which has been discontinued since the map was made because the Columbia Broadcasting System temporarily suspended the network program on which the American Medical Association had a place.

The extent to which health broadcasting is being done, aside from programs by medical societies, was shown in a survey by the U. S. Public Health Service during 1931 in which it appeared that 15 state health departments regularly issue broadcasts; 6 do so irregularly, 18 cities are regular broadcasters, while 17 more use the radio at irregular intervals.[5]

The programs carried out by public health departments are also, in most instances, carefully prepared from the standpoint of authenticity. They are likely to emphasize a socialized viewpoint; they gravitate frequently and naturally to a perfectly legitimate effort at building prestige and good standing for the particular department which sponsors them. Some of them are conducted in cooperation with organized medicine, or with medical schools.[6]

Commercial programs are of two distinct classes: There are those which set forth correct and authentic health information in an ethical manner and as such must be regarded in the light of legitimate and valuable contributions to health education. The other type of commercial program is that which cynically misuses the popular interest in health for promoting the commercial welfare of the sponsor and is, to say the least, careless about the use of scientific facts when it does not actually misrepresent them. It is not necessary to name examples, since both types of commercial program are well known.

Radio advertising of unethical practitioners sponsoring discredited medical theories for their own commercial advancement, or programs by cultists, constitute the fourth group and these, as we should expect, are given over to propagandizing unsound and often obviously crazy ideas—for which, strangely enough, the public seems to fall—which constitute the basis for the so-called beliefs professed by medical cultists. The cultist is easy to recognize. He is ignorant, and so is led to sponsor unsound theories, or he is crooked, and sees a chance to make money out of duping the public. He is boastful. He is abusive, attacking all who challenge his claims. He uses testimonials—repeatedly proved to be worthless—in support of his claims. He has a free "come on" offer—books, trial treatments, or what have you. He claims to cure incurable diseases. He inveighs against established scientific methods. He offers guarantees. Beware of any medical broadcaster who promises too much!

The ethics of radio broadcasting have been the subject of discussion from time to time. An excellent resume of broadcasting ethics is contained in an article by Leland[7] of which the salient points may here be reviewed. A declaration by the Judicial Council of the A. M. A. is the basis for determining the ethics of broadcasting.[8] It states in effect that radio is a form of publicity and consequently subject to the same ethical restrictions. This means, of course, that radio programs must be sponsored by local or state medical societies and not by individual physicians. In some quarters the speaker remains unidentified, or as in Dallas, is designated by the initials of the local Station, "Dr. K.R.L.D."[9] It is generally held that local practicing physicians should broadcast incognito, while staff employees, such as those at A. M. A. headquarters or lay secretaries of medical societies, or visiting celebrities, may be announced by name. On the other hand, there are many exceptions and it is worth noting that radio stations object to unnamed speakers since they recognize the fact that listeners, as a rule, desire to know to whom they are listening. Whatever may be the decision locally, there is precedent for it.

It will be interesting to note in passing that the British Broadcasting Corporation is putting on a series of talks by distinguished but unidentified doctors.[10]

Editing of talks by committees to eliminate uncontrolled expression of individual opinion is held to be desirable. Radio time is supposed to be donated by the station; inasmuch as the profession is furnishing valuable information as a public service, the station ought to participate in the same spirit. Of course, if a health talk is sponsored by a commercial organization, then the time must be paid for, since the whole project at once becomes advertising. Naturally this latter class of health talk is not one of those authorized by medical societies.

The ethics of radio broadcasting are of in-

terest not only to the profession, but to the public, which is why I have given them so much attention here. An ethically sponsored program is a safe one to listen to; you will not be misled.

The radio program itself may be one of several different kinds. Examples of all of them exist or have existed and all have their advocates.

The first kind of radio program is the straight talk or monologue, in which a given set of facts is presented in a narrative manner. Needless to say, such a talk cannot be a scientific dissertation of the character one expects in a medical society meeting. It should be popularized in form and manner of presentation, but it must not be sensationalized and it ought to maintain an air of dignity suitable to its scientific character and its educational motive. This does not mean that it has to be dull. It can be sprightly in tone and need not be devoid of humor. It should deal with topics of public interest and should be timely with respect to season and local conditions. By far the greater number of health talks sponsored by organized medicine are of the straight-monologue type and indeed, this seems to be the form best suited for the average radio program.

The second style of presentation is the interview, in which two voices are used. Sometimes the radio announcer, after introducing the speaker, proceeds to question him and the doctor answers the questions. This form is adopted by a few medical societies, notably Wayne County, Detroit. It has the advantage of a little more variety than the monologue type. In its best form, it consists of a rather quick interchange, pointed questions receiving brief answers and the style conversational and not stilted.

A third style is the question and answer, in which questions are read by the radio speaker and then answered. These may be actual questions received by mail, or they may have been prepared by the speaker for the purpose of providing a cue for the answer. There is grave danger in this method, especially in view of its frequent adoption by quacks and cultists. Physicians know that questions relating to medical subjects cannot be answered by mail, or by radio, except in the most general terms. Diagnosis and therapy of individual cases cannot, of course, be discussed in this way, though fakers constantly pretend that they can do so. The public, unfortunately, cannot discriminate and if the medical profession uses the question and answer method it is not in a good position to discourage quacks when they do likewise. It would be wiser from the listeners' view point to look with suspicion upon questions and answers over the air unless their sponsorship is unimpeachable.

The fourth method has not been extensively employed by organized medicine, though health departments and voluntary agencies have been experimenting with it. It is the dramatic playlet embellished with music and sound effects. An example of this kind of program is a certain commercial feature now on the air sponsored by the manufacturer of a well-known antiseptic. Such a program, opening with chimes, music, and an introductory announcement, followed by a brief dramatic sketch and closing with music, is theoretically the best program from the standpoint of listener appeal. It is the form, not the content, to which I refer. If the dramatic sketch is carefully constructed, both from the standpoint of playwriting and of the scientific facts presented, it will have more listeners and will reach them more effectively than either the monologue or the interview. It takes time and care to write and requires rehearsal for successful production. The method is now being used by the Connecticut Department of Health and the Minnesota Public Health Association[11] and a modified form of it by the Iowa State Medical Society and State Health Department jointly. The Massachusetts State Health Department has a radio forum weekly.[12] The Detroit Health Department and the Detroit Dairy Council used it in a highly developed form, presenting 13 historical radio dramas dealing with such subjects as anti-rabic vaccine, diphtheria antitoxin, Lister and antisepsis, Florence Nightingale, and the yellow fever researches by Reed and Carroll. These dramas were written by a newspaper man and playwright and were acted by a professional group. They were paid for by the Detroit Dairy Council and the announcements were advertising copy for dairy products. The cost was $500 per broadcast.[13]

The Racine Health Department in 1931 broadcast 115 dramatic episodes with music on a three-times-weekly schedule, setting forth in various series the subjects of infant health, vacation, diphtheria prevention, early diagnosis of tuberculosis, public health nursing, and sanitation. The characters were every day people talking like every day people and meeting health problems common in every day experience. The general tone was light and in places frivolous, but the serious educational purpose was never lost sight of.[14] The characters were played by members of the public speaking class in the local high school and the drama section of the Woman's Club. It was this effort which prompted the surveys previously referred[15] to and by which a radio audience, comprising approximately 40 per cent of radio-equipped homes surveyed, was built up.

The choice among the above methods of presentation must be made according to local conditions. Each has its advantages and each its disadvantages.

A radio program standing alone is like any other publicity method by itself. The value of any single medium can be enhanced by teaming it up with others. Every advertiser knows that the radio or the billboard alone is not as effective as when combined with magazine advertising, newspaper advertising or personal salesmanship. In the same way, the radio health program gains strength if it is supplemented by press releases, as exemplified by the activities of several state medical societies, or by speakers' bureaus available to various groups. An interesting application of this principle is seen in radio essay contests, such as that now being sponsored by the Woman's Auxiliary of the Medical Society of Missouri[16] and also the Tuberculosis and Public Health Associations of Westchester County and of Yonkers, New York.[17] These are handled by offering a prize for the best essays on a given topic and the prize-winning essays are then read over the air by the writers. In this way attention is directed to the radio program and education is achieved by stimulating interest and fostering participation, instead of merely passive listening. The opportunity to enlist participation is another value in the dramatic program, as previously mentioned.

Listeners often ask for copies of radio health talks. The American Medical Association talks are not now so distributed. On the other hand, since many of these talks are based on *Hygeia* articles and other published material, there would seem to be something to be said in favor of building up listener interest by making available copies of broadcasts upon request. Certain medical societies, as for example Philadelphia, Pittsburgh, and Massachusetts, publish their talks in bulletins or journals. Requests for copies may also be valuable as a guide to the effectiveness of various kinds of talks and to a choice of subjects which attract the public.

A word or two about radio etiquette may not be amiss. A radio station is one place in the world where the value of time is paramount. Time is the stock in trade of the broadcasting station; it is the only commodity which the radio industry has for sale. The program must run according to a precise schedule and there is no elasticity about it. It follows that radio speakers must be on time, not only to begin the speaking, but to make use of the well known terminal facilities which so many speakers after dinner seem to lack. A popular discussion of what radio broadcasting is and might be[18] says that radio has shortened the speeches that the citizenry has to endure and facetiously remarks that the 40-minute-to-an-hour-and-a-half speaker with nothing much to say probably had a lot to do with the mounting death rate from nervous diseases, not to mention high blood pressure. The radio talk from its very nature, must be precisely timed and so the listener, at last, gets a break.

The sources of radio talks used by the American Medical Association and component societies are various. Many of the larger societies prepare their own talks. The Bureau of Health and Public Instruction also prepares or adapts talks for use in the headquarters broadcast. Some of these are obtained by modifying published articles in Hygeia or THE JOURNAL, or at least basing the talk on such articles. State and city health department publications and other medical journals may also be used, as may books on medical history, and public health. Many of the societies and health departments preparing their own talks have permitted the Association to have copies

of them. It is obvious that a talk broadcast, for example, in the Atlantic States can be rebroadcast on the Pacific Coast or vice versa without danger of duplication. Moreover, a good talk will bear repeating after the lapse of a suitable interval. Therefore the Bureau of Health and Public Instruction has created a central file to which all medical societies are invited to contribute. Selections from this file are mimeographed and made available to county societies, credit being given to the source, that is, the society and the author. There are at the present time 93 fifteen minute talks available; 17 ten minute talks, and 133 five minute talks and in process of preparation considerable additions to each of these three lists. The new talks will be announced about July 1, 1933, and revised lists will be available thereafter each January and July. The talks are distributed gratis to county societies. Material is drawn from a wide territory and even more widely distributed. Thus the hearers get the benefit of the consolidated knowledge of the medical profession in America.

In closing, let us make a brief resume of radio. It is essentially a new art, but it harks back to an old principle. It is a return to the spoken word, replacing the lecture platforms and the visible hearers with the microphone and the unseen audience. Radio advertising is primarily a builder of good will. To the commercial advertiser it is a means of popularizing his trade names and slogans. To the health educator it is a means of disseminating the broad, general principles underlying health practices. The commercial advertiser needs to supplant radio with the printed word and the personal touch. So also does the health educator who utilizes the radio. The listener should remember these limitations of the radio medium.

While there is a record of an individual who went to a doctor instead of taking a dose of castor oil, because of a suggestion contained in a radio talk, and was successfully separated from a suppurative appendix, this is exceptional. More likely would it be possible by means of radio to interpret to an interested but inadequately instructed public the aims and ideas of modern medicine together with a general understanding of what it has accomplished and what it hopes and expects to achieve—with popular cooperation.

The characteristics of a good radio program are that it must compel attention by reason of novelty or outstanding character, must have continuity to attract regular listeners, should be distinctive, fit the character of its sponsor, be adaptable to the general character of the radio station, direct attention to the sponsor, be acceptable to the radio audience and in commercial programs must emphasize a personality. In health education programs we can well conform to the seven principles first enunciated above, but dispense with the emphasis on personalities if our listeners will allow us.

The radio, from the standpoint of the medical profession, is an important factor in helping to determine relations between the profession and the public. It is a valuable tool for the building of better understanding between doctors and laymen, and as such it should be used skillfully and understandingly to its uttermost possibilities, both by broadcasters and listeners.

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ROCKY OUTLOOK

"The thing for you to do," said the doctor to the man with the frazzled nerves, "is to stop thinking about yourself—to bury yourself in your work."

"Gosh!" returned the patient, "and me a concrete mixer."

—*Border Cities Star.*

THE EDUCATIONAL COMMITTEE OF THE ILLINOIS STATE MEDICAL SOCIETY
ITS AIMS AND ACCOMPLISHMENTS

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Though begun less than a decade ago as a casual experiment, the educational committee of the Illinois State Medical Society has proven itself both "an ever present help in time of trouble" and a staff of strength and resiliency. What was looked upon a bit askance at its inception has now come to be regarded as one of the essentials in the mechanism of organized medicine in every community.

This committee has been a first aid asset for the conservation of the rights of the profession and the preservation of the mother science as well as a considerable factor towards benefitting public health and welfare both by exposing the quack and by telling great audiences of the laity, how and why, scientific medicine and scientific doctors and surgeons labor efficaciously to allay pain, cure disease and remedy the afflicted.

During eight years of existence the educational committee of the Illinois State Medical Society has gone far and has accomplished much.

Where the general public is concerned, activities of this committee are of an inestimable value. As an important factor in the effort to stem the drift of medical practice from the hands of the medical profession into those of uneducated, misinformed or unscrupulous individuals, this educational committee has demonstrated that this work should have been begun at least a quarter of a century ago. Throughout this neglected interval have sprung up many vicious tendencies and drastic evils, destined to destroy the usefulness and inherent purport of the application of the science of medicine.

Certainly these evils could not have flourished unless the general public had afforded fertile soil for this growth, and as certainly this fertile soil afforded by the public comes to no small degree from the general ignorance on the part of the public, that in its turn has been fostered, unconsciously enough, by the former rigid aloofness on the part of the medical profession, which has kept the profession from taking the general public into its confidence as to the quality and quantity of progress made by doctors in the conquest or alleviation of disease.

No fairy tale broadcast by quack, charlatan or cult can equal the wonders, ay, almost the magic, accomplished by the ethical profession in the last 55 years. It may be that modesty engendered the apathy felt by the medical profession as to the public's knowledge of what medicine has done, and is doing. Even if this attitude can be explained by modesty on the part of the profession, it must be admitted that for this modesty, the general public has been forced to pay a terrific price. That price in turn is being exacted of the profession itself by the turning of the public to those institutions fostered by the worst enemies in the world of initiative medical practice—the endowed medical foundation, and the lay institution taking over the practice of medicine, especially when controlled politically. Equally true is it that in the repetitive process of history, the public will suffer from the demoralization of the quality of medical service resulting from the socialization of medicine through these foundations. In the meantime ethical medicine has begun its herculean task of setting the public straight on the question of medical economies, since this question vitally affects public health, public welfare and even the future of civilization.

Terrific as is the handicap resulting from this half century of medical apathy, and containing among other alarming fundamentals, the idea prevalent in the minds of many wealthy, misguided philanthropists groping to achieve the greatest good for the greatest number, and hoping to do this through the self-arrogated direction of the practice of the healing arts, yet enough progress has been made to justify the existence of the educational committee and to urge its continuance of effort and enlargement of orbit.

Through the work of the committee, physicians have taken steps to recover that leadership in local health movements which was rightfully theirs. Lay groups finding that this leadership means success for health activities, are seeking the advice and help of organized medicine. Illinois reaping the benefit of the sanest of medical practice acts as well as an efficient Educational Committee, is hailed as a

leader both by the laity and the profession.

For example, in Illinois a rapid resume of what has been done, or is now in process of accomplishment, pivots upon certain elemental proceedings urged upon the profession for upwards of a quarter of a century by THE ILLINOIS MEDICAL JOURNAL and its editor.

These fundamentals include combating.

(1) Lay dictation and control of medical practice.

(2) Endowed foundations entering practice of medicine.

(3) Corporations engaged in medical practice.

(4) Inimical medical legislation.

(5) Political control and interference with medical practice.

(6) Unrestricted activities of quacks with general public health.

(7) Lay and semi-lay pay clinic for other than the poor.

(8) Supersedence of physician by over-trained nurse.

(9) Health departments practicing general instead of preventive medicine.

(10) Various other similar and correlated vicious tendencies.

Let it be repeated again and again that if the science of medicine is to live up to its ideals and purposes, it must fight these enemies of the public health and national welfare with their own fire, and in the terms of their own language. Not by false promise or sanguine deceptions such as are the charlatan's stock in trade, but rather by plain statements of scientific fact, can the medical profession save the national health from destruction, through its justified promises of alleviation, and even possible cures, of physical misery among a suffering public.

To bring this knowledge to the public is the task of the educational committee of the Illinois State Medical Society.

Vitally important too is the reinforcement of the profession. Standards of medical education have been raised from time to time until at present, the requirements are so high, that a man can not enter the practice of medicine until he has reached approximately twenty-seven years of age. This means, too, that he will have expended upwards of $25,000 of money already earned to secure his medical education, to say nothing of the loss of another $25,000 potential profits that he might have been making from the time he was sixteen years of age, while working as a bricklayer, at wages far in excess of what the average doctor makes in practice of medicine.

Pit this against the exponents of the cults and systems who are being advertised for in all the cheaper class of magazines and periodicals, to "take an eight weeks' course and learn to be a somekindoranother-ic and get a doctor's certificate." Brakemen, plumbers, and even ambitious barbers are studying short courses of weird systems at home, nights and noon times, and actually clamoring for recognition as scientific medical men. The public shows signs of awakening to what it needs for its own protection, through efforts of the education campaign of the Illinois State Medical Society. The many contacts made by the Committee with numerous lay groups have been an important factor in bringing about this awakening, that even yet is not as thorough as it should be.

Another momentous point lies in the fact that the trend of modern education has left its mark upon the younger generation of doctors, in that these younger men forget that the routine of life lies in small things. More than seventy-five per cent of human ailments are to be classed accurately as temporary trivialities. Now these younger doctors, for the most part, have ambitious eyes fixed upon the great moments of medicine with almost complete disregard of the everlasting minorities. Intent upon hopes of the critical laparotomy, or other serious surgical operation, idealistic young physicians are prone to neglect the every day need of the ailing public. And right here is the loop-hole through which the bogus practitioner creeps to find the foothold by which he sometimes dislodges and supersedes the skilled man. We are educating specialists, and not doctors. The public needs many doctors and only a few specialists. And this the young doctor should be taught.

Out of the inattention of scientific men for ordinary wants of an ailing people, spring and flourish the mass of cults and of mock medical systems that insidiously deprives the sick of the available expert medical attention. In other words, it is the seeming indifference

of physicians towards the annoying ailments of prevalence and frequency that forces the people to seek care and a sympathetic ear from the pseudists.

Powerful appeal of false healers lies in the seeming shrewd fashion in which these dispensers of bunk appear to take the patients into the full confidence of their supposedly wonderful systems. The subtlety of this suggestion to personal vanity is incalculable.

The educational committee of the Illinois State Medical Society daily experiences and tries to offset these contributory menaces to the national welfare and the public health that have arisen from this apathetic negligence on the part of the medical profession. These include the centralization of administrative power in non-scientific authority, and in non-medical people; fiat medical practice, and the usurpation of medical rights by non-medical people; insolences of overtrained nurses, who attempt to practice medicine instead of restricting themselves to their own orbit; hospitalization of the sick at the mercy of pecuniary considerations; the introduction of dangerous and restrictive legislation and the numerous chiropractic and osteopathic bills.

Although this fight is waged by this Educational Committee from Illinois' standpoint, yet the fight is not for Illinois alone. The State has become only a type state with every other state in the Union feeling the menace with equal weight.

The educational committee aims to place the campaign in the very center of the public eye. Work of this sort costs money as the cults have found out, as they pay millions of dollars annually. Cults and their kind must pay for every inch of space in a newspaper, magazine, or on a billboard. The medical profession deals, in the record of its achievements, with that sacred element of modern life, known as NEWS—in other words, in information of accurate interest and benefit to the human race, whether as a guide, or as a warning, all of which is based upon personal experience or scientific fact.

The difference between "news" and "advertising" is the difference between ethics, and in this instance, false conceit. The quack spends millions to air his false conceit in advertising. The medical profession has mistakenly been too aloof to realize the value of "news."

Thousands of avenues of distribution have been opened to the purveyors of ethical elucidative data. The space that this data secures from the public and lay press, and other distributive centers is not for sale at any price. No quack can secure that hearing, if it is known that he is a quack. The medical profession got busy and is telling the truth about itself so that the public is learning the difference between skill and bunk, just as it has learned the difference between tin and silver, cotton and wool. The lay public is not the only section of the population that needs education. There are many physicians who need a little education themselves to have their eyes opened as to the speed and completeness with which medicine is drifting out of the hands of the doctors into most questionable harbors.

The committee outlines that among the aims of its work have been:

1. Classification and centralization of the resources of the association in point of publicity.
   (a) Men engaged in research work of public interest.
   (b) Men tangent to the lay press, the lecture platform, stage and other centers of public distribution.
   (c) Medical men in the public eye, whose spoken or written word has a publicity value.
2. Establishment of general publicity media for news and feature material, which shall tend to:
   (a) Correct misinformation on medical subjects.
   (b) Place the profession more conspicuously in the lay press.
   (c) Present an adequate background for additional protective legislation.
3. Enlistment of active co-operation from the county societies in the state for the purpose of:
   (a) Making the campaign an affair of every doctor, rather than a committee.
   (b) Inviting participatory rather than detached criticism.
   (c) Securing for major news a state wide diffusion that will exceed syndicate possibilities.

(d) Utilizing local detail and experience for the feature work of the central bureau.

(e) Radio talks by doctors.

For the accomplishment of this, the Illinois State Medical Society appointed the Educational Committee.

A brief resume of the work during the last twelve months is indicative of the progress made in developing medical leadership, cooperation of lay organizations, and the eagerness with which authentic health information is sought.

1. *Press Service:* The preparation of news stories based upon current activities of the state society and the county and district societies is keeping organized medicine before the public eye. Special emphasis upon this type of press service has built up a much better feeling among newspaper editors so that they seek stories about medical meetings. In the past twelve months every newspaper in the state received announcement of one or more medical programs. This service is available to secretaries and program chairmen providing they furnish the Committee with the facts of their meetings. Further development is both possible and most desirable.

The health column furnished by the Committee for release over local county medical society authority has proved its worth, as it has been accepted by more than one hundred newspapers.

With a total of 11,055 releases in a twelve month period, there is little doubt but that every newspaper and its readers were encouraged by the fact that physicians are willing to give out information concerning health problems of local and national importance and benefit.

2. Preparation of material for use by physicians who are to speak before lay organizations. The loan library service of the Committee has increased tremendously until at the present time more than three hundred package libraries on almost as many topics are available for physicians, school teachers, members of debating teams, and club women. Where did college debating teams go for information on the subject of "Socialized Medicine?" They came to the Educational Committee of the Illinois State Medical Society and within a few weeks' time more than twenty package libraries on the subject were sent out to students in middle west states.

3. The establishment of a Speakers' Bureau proved a very wise move. This has been a Godsend to women's clubs, Parent-Teacher Associations, superintendents or teachers in schools and business and professional groups of all kinds. Thousands of physicians have been scheduled to present health talks, an indication that the Speakers' Bureau is satisfactorily filling a needed service. If organized medicine is not equipped to fill this need, where would the laity go for information on health problems? Hitherto they have "guessed" or considered the quack.

4. Thousands of radio talks have been given by representatives of the Committee. Because these talks were educational not one cent was paid or will be paid to radio stations for the time given. What other lay or professional organization can report a total of 561 radio talks, each ten or fifteen minutes in length, in a twelve month period? Yet, that is the record of your Educational Committee! Copies of these radio papers are on file in the office.

5. The Educational Committee has been the general contact point between the lay public and the profession in the state of Illinois. Without assuming the role of dictator the Committee has been able to work out certain problems with the leaders of lay groups which resulted in lessened misunderstandings between the local members of those groups and local medical societies. Every lay group of importance in the state has had contact with the Committee. Contacts made by individual physicians are of great importance in developing the work of the Committee and should serve as an impetus to doctors who are taking their leadership in local health matters.

6. The direct assistance given by the Committee to county medical societies has increased attendance at meetings and has given physicians an opportunity of presenting their scientific papers. Programs totaling 158 were scheduled for medical meetings in the last twelve months. The office of the Committee sent out thousands of notices of these programs.

Medical societies have been supplied with information concerning work of the various

Committees of the Council such as the plan for handicapped children's clinics, the result of the report on the care and compensation of panper cases, reprints of articles of special interest, the work of the Medical Economics Committee, plans for post-graduate courses in pediatrics, and the like.

Local problems faced by county medical societies have been presented to the committee and every possible assistance has been given.

The most captious of critics will observe that this program is one that is carried out with all due consideration for the traditions of self-respecting medicine. Dignity, truth and redemption of the public welfare from the quagmires of bunk will be the eventnal fruits of the campaign. The general public is hungry for news of the functions of the ever troublesome body and the simple way in which it may be cared for. Proof of this is found in the tremendous amount of "medical answers" carried in every daily periodical in the country. Medicine is the most destructive of professions. Working on its elemental doctrine of prophylaxis it labors to its undoing, but there is much yet to be done before the race will have reached the millennium of physical perfection.

The doctor as an individual is caught between two fires. In addition to the work of the bunco-medics, the increasing knowledge of specifics for standardized diseases has brought into play a vast possibility for self-medication, that an egotistic public has availed itself of with much avidity. The fine point of diagnosis is too often overlooked. One of the crimes against it is the maudlin cry of the chiropractic that any ailment under the sun can be diagnosed from a wiggle of the spine. If the claim were for any ailment under the sod, there would be no argument, but not until the death rate shows an alarming increase will the public awake, and that too late.

Dr. George E. Vincent, an able educator, has said "In democratic countries like the United States, Great Britain, and Canada and Switzerland, the popular estimate of the social value of science, the general esteem in which scientific men are held, the willingness of legislative bodies and of private citizens to supply funds, and the readiness of leaders and people to accept and apply the results of scientific research are determining factors in the progress of knowledge. Unless the leaders of opinion and a substantial proportion of the adult population appreciate the aims and methods of science, understand something of the value of evidence, are familiar with reasoning processes, and are prepared to recognize the authority of disinterested experts, science can not attain the place it deserves, or render the service of which it is capable. Chemical, electrical and mechanical engineers have won distinction and recognition because their work is tangible and convincing both to the trained leader and to the man in the street. The medical scientist, with vastly more complex problems to solve, must ask for the support of a much more intelligent imagination and sympathetic form of public opinion."

It is the creation and support of such a public opinion that is the aim of the educational campaign of the Illinois State Medical Society.

CARCINOMA OF THE BLADDER

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Carcinoma of the bladder presents the same problems as does carcinoma in any other part of the body, namely, the early diagnosis and the early treatment. Although much has been written about the early recognition of malignant disease, the fact remains that in about 70 per cent of the cases that I have seen, the carcinoma was far advanced when the patients first came under observation. Failure to recognize and to institute early treatment on the one hand, and the location of the carcinoma on the other hand, are the two factors responsible for the relatively poor results in treating this group of cases.

Pathology. 1. Location. As is well known, most of the cases of carcinoma of the bladder occur on the base of the bladder, that is, in the region of the trigone, the ureteral orifices and the internal urethral orifice. The frequency of involvement of the ureters is probably greater than is generally appreciated. A recent review of a large number of cases revealed the fact that the right ureter was involved in 23 per cent, the left ureter in 25 per cent, and both ureters in 14 per cent. In other words

*Read before the Inter-State Postgraduate Medical Association of North America, Milwaukee, Wis., Oct. 21, 1931.

in 62 per cent of cases carcinoma was found in the region of the ureteral orifices.

Closely following the frequency of involvement of the trigone and ureteral orifices is involvement of the internal urethal orifice.

In the most accessible parts of the bladder, namely, the vertex, posterior wall and anterior wall, carcinoma is rare. Probably the carcinoma is more frequently on the anterior wall than it is on the posterior wall and vertex.

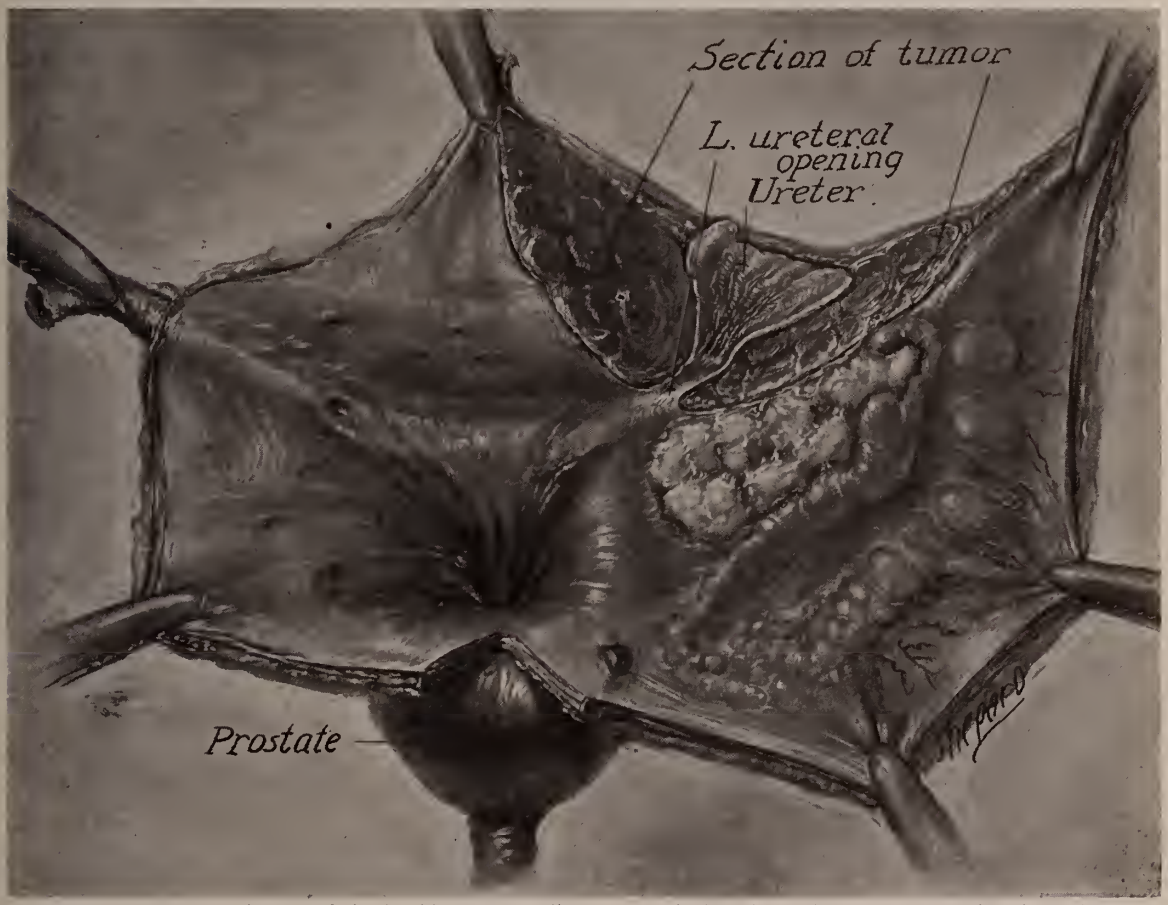


Fig. 1. Primary carcinoma of the bladder surrounding the vesical end of the ureter resulting in stricture of the ureter with dilatation above.

Involvement of the ureteral orifices by tumor results in secondary changes in the ureters and kidney pelvis and soon leads to the production of hydronephrosis with impairment of renal function, to which is added sooner or later the element of infection. If these pathological facts are borne in mind it is easy to understand why certain post-operative complications, such as acute pyelitis or pyelonephritis, suppurative pyelonephritis and uremia, arise relatively frequently. The changes in the ureter resulting in secondary changes in the upper urinary tract may be produced in various ways: 1. Most frequently the carcinoma produces infiltration of the ureteral orifice or the wall of the ureter, producing a carcinomatous stricture; 2. when the carcinomatous mass extends beyond the bladder wall, although an extra-vesical tumor mass is present, the carcinomatous mass exerts pressure upon the ureter, producing obstruction with secondary changes of the ureter above and in the kidney; 3. carcinoma may metastasize to the ureter and so produce a stricture; 4. in some instances the growth of carcinoma involves the trigone to such a degree that the trigone is

elevated sufficiently to produce an obstruction of the ureter.

The tumor may spread in any direction. Tumors taking their origin in the vertex or anterior wall may spread to the prevesical space, involve the abdominal wall and occasionally the pelvic bone. The growth may spread to the peritoneum at its attachment to the bladder and cause the peritoneum to be firmly attached to the bladder by the infiltrating growth. In one of our cases the peritoneum

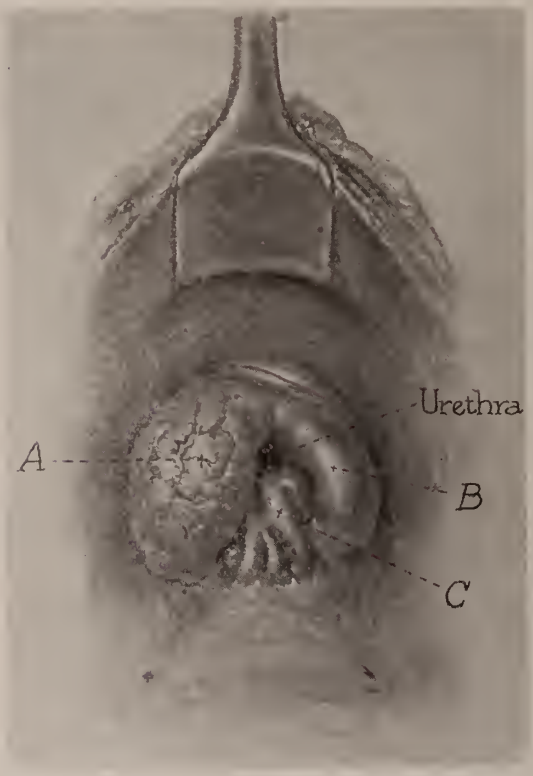


Fig. 2. (a) Tumor springing from right half of internal urethral orifice. (b) Swelling of opposite side of bladder neck. (c) Edema on floor.

showed a large carcinomatous nodule; hence, in carcinoma of the dome, if resection is decided upon, it might be advisable to open the peritoneal cavity to determine this point.

Most of the tumors being located on the base of the bladder, extension occurs toward the neck of the bladder and involves the urethra. Involvement of the prostate by direct extension may make it difficult to determine clinically whether the primary seat of the tumor is vesical or prostatic. In some of the late cases there is involvement of the seminal vesicles. In several instances I have noted involvement of the rectum, resulting in a rectovesical fistula.

Involvement of the abdominal wall following an extensive resection has occurred in a number of my cases. In one case there was an enormous involvement of the abdominal wall after an unusually extensive resection; the tumor was relatively small and the mobilization of the bladder easy. The recurrence of tumors in the abdominal wall following the removal of benign papillomata was frequently observed in the pre-fulguration days of treatment of papillomata. Often these recurrences were exceedingly malignant, although the tumor removed was apparently benign.



Fig. 3. (a) Showing internal urethral orifice. (b) Ureteral orifices with edema behind them. (c) Large papillary tumor springing from the trigone.

Metastasis occurs relatively late. As a rule the tumor does not tend to metastasize until it has reached a large size. But this does not always hold true. Small tumors of the bladder have been known to produce bone metastasis, the cystoscopic appearance of the tumor being no guide to the possibility of metastatic complications. In one of our cases the cystoscopic picture was that of an apparently benign papilloma and the first indication that we were dealing with a malignant growth was that obtained by a routine roentgen-ray examination which demonstrated the presence of bone metastasis.

Although carcinoma evidences no pathognomonic symptom or sign, a presumptive diagnosis can be made in the majority of instances.

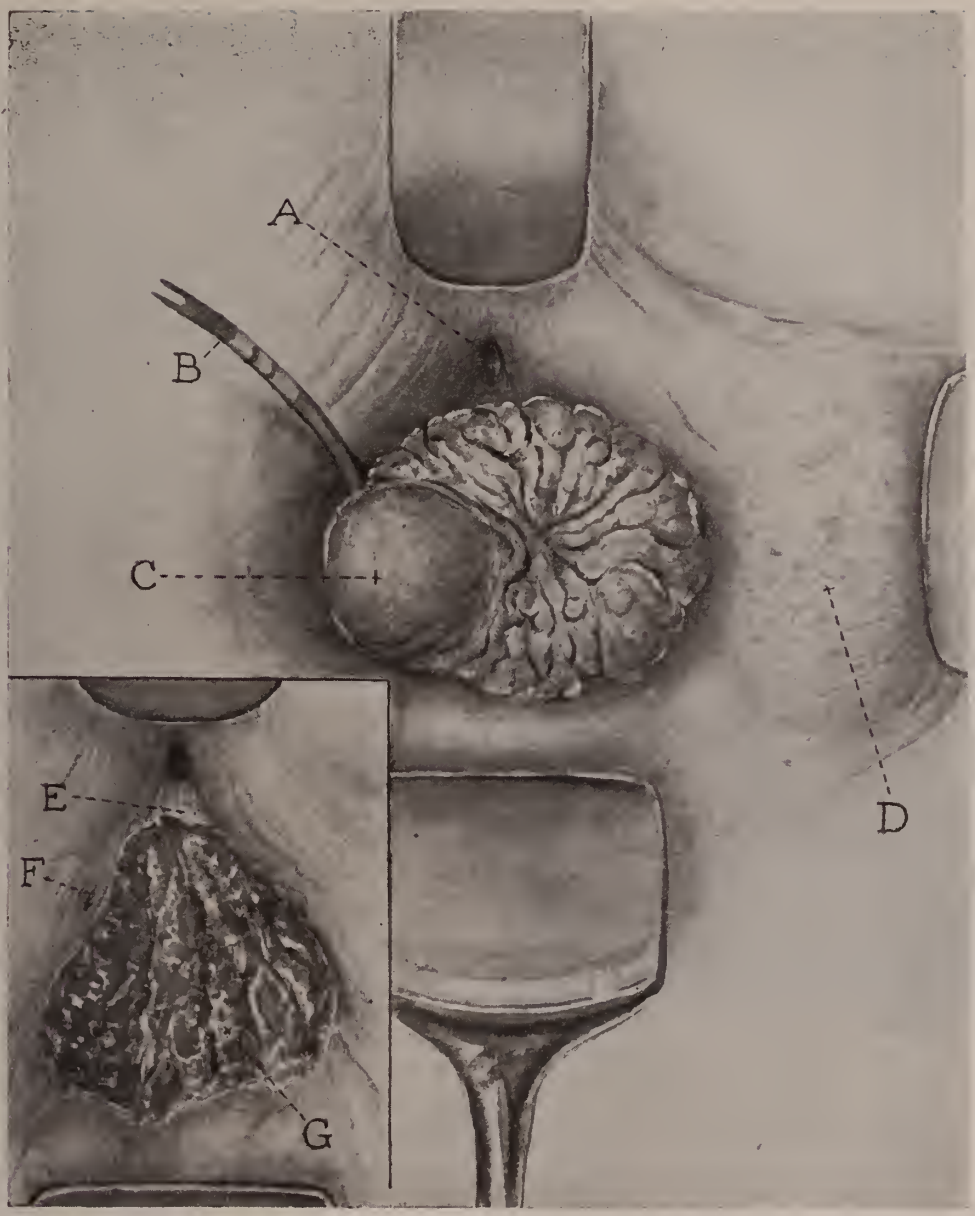


Fig. 4. (a) Internal Urethral Orifice. (b) A catheter inserted in left ureter. (c) Smooth area on the surface of the tumor. (d) Area of edema on right bladder wall. Insert. (e) Normal remnant of trigone. (f) Normal left ureteral orifice. (g) Showing extent of involvement of trigone and base after removal of tumor by surgical diathermy.

Similar to any other medical or surgical problem, the most important things are the history and physical examination as well as some consideration of the age and sex factors. The diagnosis, of course, is based finally upon the cystoscopic examination; but, before this is done, there are enough symptoms and signs in the average case to suggest strongly the possibility of the presence of a tumor in the bladder.

SYMPTOMS

Hematuria. The presence of blood in the urine is the most frequent symptom mentioned by the patient and in the largest number of cases the first symptom noted. Thus, in reviewing 300 cases of carcinoma of the bladder, a history of the presence of blood in the urine was noted in 277 cases, or, in 92.33 per cent of cases. I believe it is probably fair to assume

that in the remaining 7.67 per cent, the patients passed blood at some time or another before coming under observation, but they failed to note its presence. Not only is hematuria the most frequently noted symptom, but in 166 cases, or 55.33 per cent of the 300 cases, it was the first symptom noted by the patient.

It would seem from these figures that it is hardly necessary to stress the importance of hematuria as a symptom of malignant disease, and that instead of temporizing with various forms of drug treatment, each and every patient should be subjected to complete examination at once to determine the cause of the bleeding and the location of the pathology producing the bleeding. And yet the fact remains that this is not done, as evidenced by the large number of patients who apply for treatment so late in the course of the disease that often they are beyond surgical aid, such cases being rightly classified as inoperable. Of course, in women it is necessary to bear in mind the possibility that the blood may come from the genital tract, namely, during the menstrual period.

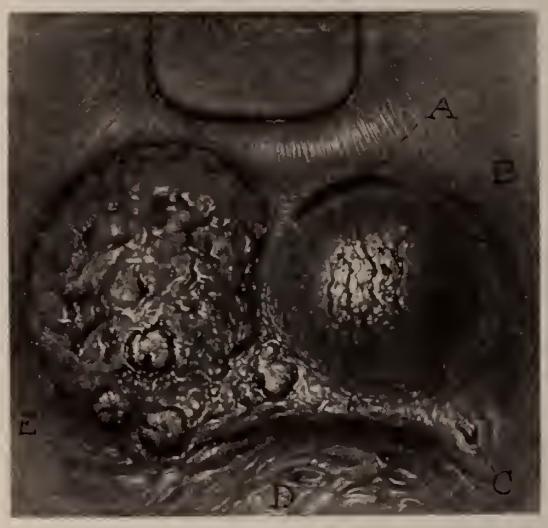


Fig. 5. (a) Internal Urethral Orifice. (b) Large adenoma of the prostate. (c) Right ureteral orifice. (d) Infiltration by carcinoma of interureteric ligament. (e) Large papillary tumor.

As a rule, the first attack of hematuria is not accompanied by pain or frequency, disturbances which are so common later on in the course of the disease. As a rule, the blood in the urine is well-mixed, but not infrequently large clots are passed. When the tumor is located near the internal urethral orifice the bleeding is terminal in character, this being no doubt due to pressure exerted upon the tumor by the bladder at the end of urination. On account of the hematuria being devoid of pain and not causing frequency, a diagnosis of essential hematuria is unfortunately frequently made, with the net result that the bleeding stops, the patient is lulled into a sense of false security, and the opportunity for the early institution of surgical treatment is lost.

Nearly as important as the history of gross blood in the urine is the symptom, so frequently mentioned by the patient, that red blood cells had been found in the urine. A patient of this sort is a subscriber of one of the various Bureaus of Analyses and has been told that the urine shows microscopic red blood cells. The significance of the persistence of red blood cells in the urine cannot be overemphasized and their persistence calls for careful study to determine their cause.

Frequency of Urination. Frequency of urination may be the first symptom or it may occur later on in the course of the disease. In 236 out of 300 cases, or 78.66 per cent, frequency of urination was present, and in 60 cases, or 20 per cent, it was the first symptom noted by the patient. It may be due to various factors, one of them resulting from the tendency of the carcinoma to undergo necrosis, thus causing cystitis to develop sooner or later, frequency being due to the presence of a coexisting cystitis. In some of the cases, no doubt, frequency is produced by the irritation of the tumor which may act in the manner of a foreign body. Probably in a certain number of cases a diminished bladder capacity, due to the enormous size of the tumor or the infiltration of the bladder wall, causes frequency.

Nocturia. Nocturnal frequency was noted in 195 cases, or 65 per cent. On the other hand, it was only recorded as the first symptom noted by the patient in 18 out of 300 cases, or 6 per cent, standing therefore in marked contrast to nocturnal frequency of urination which is so common in prostatic hypertrophy.

Burning on Urination. Burning on urination was noted by 157, or 52 per cent, of the cases and it was the first symptom noted in about 5 per cent.

Pain. The pain has been variously de-

scribed as a burning one. In the early stages it is frequently absent and often varies in intensity. It may be present only during the act of urination, and in the cases in which the tumor is not infiltrating in character may be absent altogether. It is probably due to infiltration of the wall of the bladder by the tumor or to inflammatory changes in the bladder wall. Occasionally it is caused by obstruction during the act of urination.

Other symptoms are relatively uncommon, hence there is no necessity of elaborating on them.

FIRST SYMPTOM NOTED

Hematuria	166 cases
Frequency	60 cases
Nocturia	18 cases
Burning	15 cases
Pain	7 cases
Urgency	6 cases
Pain on Urination	5 cases
Difficulty	4 cases
Dysuria	3 cases
Acute Retention	3 cases
Dribbling	1 case
Loss of Weight	1 case
Sense of Pressure in Bladder	1 case
Sense of Irritation in Bladder	1 case
Hesitation	1 case
Edema in Ankles	1 case
Not stated	7 cases
Total	300 cases

TABLE OF SYMPTOMS

Hematuria	277 cases
Frequency	236 cases
Nocturia	195 cases
Burning	157 cases
Pain on Urination	80 cases
Urgency	72 cases
Loss of Weight	72 cases
Dysuria	67 cases
Pyuria	50 cases
Dribbling	33 cases
Hesitation	30 cases
Small Stream	26 cases
Incontinence	12 cases
Retention	12 cases
Tenesmus	6 cases
Passage of Tumor	2 cases

Sex. In this series there were 234 males, (78 per cent), and 66 females, (22 per cent), a ratio of 4:1.

Males	234 cases
Females	66 cases
Total	300 cases

Age. The youngest patient was thirty years of age and the oldest eighty-two years. The greatest number of cases, 107, occurred between the ages sixty to seventy years.

TABLE OF AGES

30 to 40 years	9 cases
40 to 50 years	38 cases
50 to 60 years	92 cases
60 to 70 years	107 cases
70 to 80 years	47 cases
80 to 90 years	3 cases
Not Stated	4 cases
Total	300 cases

DIAGNOSIS

If a careful history has been elicited, a relatively good impression as to the nature of the patient's illness is achieved, and although an accurate diagnosis cannot be thus established, it may be asserted in all truth that if the possibility of carcinoma be thought of, many cases can be picked up at a much earlier date than if the possibility of carcinoma is ignored. The history and a careful analysis of the symptoms are of prime importance, even though both form but one link in the chain of diagnostic evidence, and especially are both of moment in the early cases because in these there are no physical signs and the physical examination is practically negative.

In the late cases in which the diagnosis is relatively easy, the outlook of surgical relief with a hope of cure is a decidedly negligible quantity.

Rectal Examination. The rectal examination in male patients often shows the presence of areas of infiltration and thickening, and sometimes a relatively large nodular mass can be felt with the examining finger. In women, it is possible, in a certain number of cases, to palpate the mass through the vagina.

Cystoscopic Examination. The diagnosis, of course, is finally made upon cystoscopic examination which shows the presence of a tumor of the bladder, or a number of tumors, if more than one is present, the location and type, whether benign or malignant. In a benign papilloma the cystoscopic picture is quite definite. As a rule, only one tumor is present, but in some instances multiple benign papillomata may occur. As a rule, a benign papilloma has a definite pedicle and often with an over-hanging edge.

If there is any doubt about the nature of the tumor, advantage may be taken of the so-called therapeutic test by means of fulguration through the cystoscope. As is well known the benign tumor rapidly melts away. On the other hand, even though the malignant type

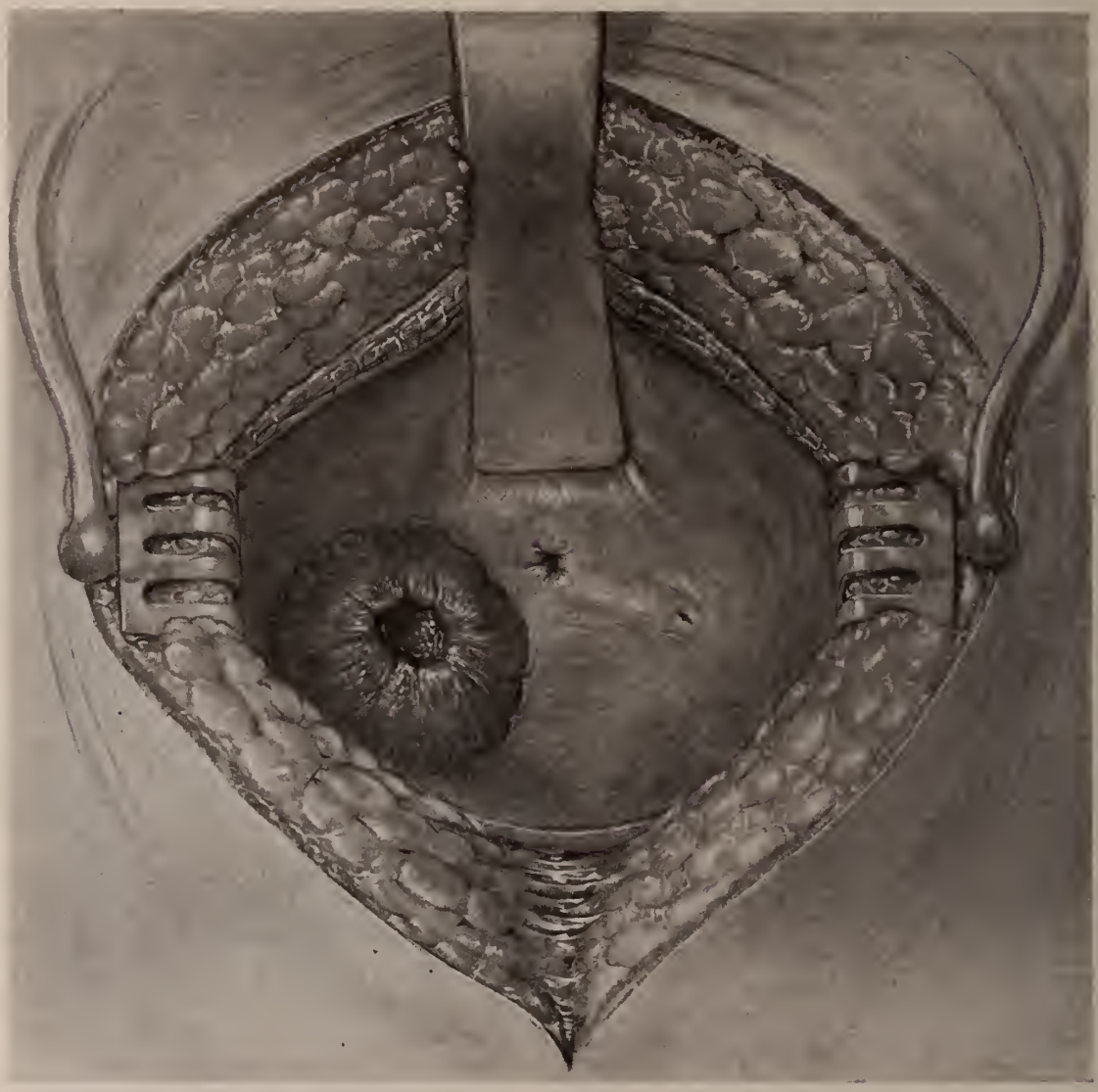


Fig. 6. Flat carcinoma involving right ureteral orifice, showing superficial ulceration of the tumor.

of tumor may melt away, it promptly recurs.

The cystoscopic recognition of a malignant tumor is, as a rule, relatively simple. Growths which show the presence of areas of necrosis, even though they have all the earmarks of benign papillomata, should always be regarded with suspicion. According to the opinion of the majority of men who have made a study of malignant tumors, the presence of necrosis in a benign tumor, so-called, is indicative of malignant degeneration.

Bulbous edema frequently occurs at the base of the bladder in malignant tumor, and also an increase in the size of the blood-vessels and often congestion. The coexistence of cystitis should always arouse one's suspicions of malignancy.

In case the nature of the tumor cannot be established, it is my opinion that there should be no objection in removing a piece for histological examination with a cystoscopic rongeur. I am well aware of the fact that there are objections to this procedure on the part of many urologists, but I do not believe that these objections are very serious. In other words, I believe that if a piece of the tumor is removed today, a microscopic section made and malignancy established, and an operation takes place tomorrow, the removal of a piece cannot be held responsible for the spread of



Fig. 7. (a) Showing a small carcinoma completely covering the internal urethral orifice. The ureteral orifices appear normal. Catheter in urethra. (b) Injection of radium needles into the tumor.

the tumor. Further, if the growth is suspiciously regarded as malignant, the therapeutic test of fulguration should be done.

Cystogram. The use of the cystogram, though its limitations are a matter which should always be borne in mind, is often of value in the recognition of carcinoma of the bladder. In some of the cases of papillary carcinoma of the bladder the cystogram was normal. In other words, a carcinoma may be pres-

ent in spite of the fact that the cystogram is normal. On the other hand, a filling defect may be present, an occurrence not due to a carcinoma but to such extraneous conditions as pelvic abscess, fibroid tumors, ovarian tumors and other lesions of the genital tract.

DIAGNOSIS OF COMPLICATIONS

1. As is well known, the presence of metastasis in carcinoma of the bladder occurs rather late in the course of the disease, yet this should not, of course, exclude a very careful search for the possibility of metastasis before treatment is instituted. In 3 cases of bladder tumor that appeared to be benign papillomata, the presence of metastatic carcinoma of the bones was found.

2. *Damage to the Upper Urinary Tract.* As mentioned under the heading of pathology, changes in the upper urinary tract, such as dilatation with resulting infection and impairment of the renal function, are prone to occur. This condition should be recognized before operation.

Intravenous Urography. With the advent of intravenous urography, things materially changed and today we are in a position to obtain information in regard to the upper urinary tract in a relatively simple and quick way. Intravenous urography is especially useful in cases where the tumors surround the ureteral orifices and make ureteral catheterization impossible.

TREATMENT

No other subject in the domain of urological surgery has undergone so decided a change as has taken place in the treatment of malignant tumors of the bladder, and it may not be amiss to review briefly these various forms of treatment.

In the early days of bladder surgery, malignant tumors were excised. This form of treatment was soon followed by recurrences. It was then proposed to excise the tumors and to include a goodly share of the bladder muscle; again prompt recurrences. Later, radical resection of the tumor was recommended, either transperitoneally or extraperitoneally. When the tumor was located in the vicinity of the ureter, a transplantation of the ureter was done. Occasionally, in carrying out this procedure it was found that the ureter was shortened and could not be readily transplanted; whereupon the ureter was simply ligated and dropped back.

Recently, on account of the advocacy of transplantation of the ureter into the bowel, the procedure of a total cystectomy with ureteral implantation into the bowel has been carried out.

At the present time there is a tendency among a number of urologists to substitute for radical surgery some of the more recent physical agents. These I shall briefly mention.

They are radium, deep x-ray therapy and surgical diathermy. It is probably a good thing from the standpoint of the evaluation of each of these forms of treatment that certain urologists limit themselves to one or another of these agents. In this way a true evaluation of a therapeutic agent can be effected much better than when a combination is employed.

It would seem that quite a large number of urologists prefer the use of radium—in fact, limit themselves to it. This physical agent is used either by implantation into the tumor through the cystoscope, or by a suprapubic cystotomy and direct implantation through the open bladder.

Others are enthusiasts in regard to the roentgen therapy; use it exclusively. Whether or not deep roentgen therapy is more efficacious than surgery or radium or surgical diathermy will depend, of course, on the ultimate results which are achieved.

Others still are advocates of surgical diathermy through the open bladder. Many of these urologists are highly enthusiastic about the results which they have obtained.

I shall limit my remarks to this latter form of treatment. Naturally in selecting one type of treatment one must in justice to it use it in the general run of cases and not in selected cases only, that is, using it in the far advanced and hopeless cases and reserving surgery for the early cases. I must confess that occasionally the temptation to resect some of the smaller tumors has been very great with me, but I have always refrained from doing this because I am of the opinion that, in order to determine the value of this agent properly, early as well as late cases should be treated. The difficult problem in treating carcinoma of the bladder is due to the fact, as brought out while discussing the pathology, that so

many of these tumors involve one or both ureteral orifices, the trigone, and the internal urethral orifices.

I will not burden you with a discussion of the surgical technique and the technique of carrying out diathermy, but I shall call your attention to some of its dangers and complications.

Cases of perforation of the rectum with the establishment of a rectovesical fistula have occurred although I have never had this complication in my series of cases. It would seem that this complication can be avoided by exercising great care during the application of diathermy and the same may be said for the prevention of the establishment of a vesicovaginal fistula.

Because of the proximity of the carinoma to the ureter, injury to the ureter is probably more common than is generally appreciated. In a certain number of instances the injury is transitory and results from edema that produces a temporary occlusion of the ureter. It is not at all uncommon to see extensive edema of the bladder mucous membrane beyond the edges of the tumor during or at the end of the application of the current. Where extensive tumors are present and where the infiltration is deep, it is necessary, of course, to have deep penetration in order to destroy all the carcinoma cells. Permanent damage to the ureter may result in one of two ways, either by a production of a stricture of the ureter with resulting hydroureter and hydronephrosis. Obstruction to the ureter, with secondary changes above, may be due to distortion of the bladder following extensive diathermy, so that, as a result of extensive scar formation, a distortion of the ureter results with interference of drainage and resulting hydronephrosis. In those instances where diathermy has caused distortion of the bladder wall or stricture of the ureter, the damage is irreparable. On the other hand, in the group of cases in which the ureteral occlusion is due to edema the damage is temporary, and no permanent injury results.

Pyelitis and pyelonephritis are undoubtedly the most frequent complications following surgical diathermy. It is easy to understand why kidney infection should be frequent if one will again bear in mind the location of the tumor, the frequency with which dilatation and impaired kidney drainage is present, and the fact that in so many of these cases bladder infection is present. The early onset of pyelitis and pyelonephritis after the operation seems to justify the conclusion that this is a direct result of the treatment. On the other hand, in many of the cases of advanced carcinoma a history of recurring attacks of chills and fever with pain in the back is readily obtained in a group of cases that have never been subjected to urethral instrumentation. In the majority of instances the acute symptoms subside in a week or ten days. In a small number in which the kidney drainage is not reestablished and the obstruction to the ureter is more or less permanent, an acute suppurative pyelonephritis results, leading to death of the patient. At autopsy in this group the kidneys are found to be the seat of extensive suppurative disease.

Among other kidney complications, often due to the fact that there has been obstruction below are anuria and uremia.

When there is extensive destruction of kidney tissue the renal function is impaired. Preoperative studies of the kidney function by means of blood chemistry and phthalein tests often reveal greatly diminished kidney function before surgery is undertaken. Naturally in this group of cases our attention must be directed to the improvement of the kidney function so as to prevent the previously mentioned kidney complications.

Acute epididymitis, singularly enough, has been a rather infrequent complication.

Further complications met with have been of a pulmonary nature. In my experience these belong to two groups, namely, pulmonary embolism and bronchopneumonia. Pulmonary complications have occurred in some of our cases in which the patients were operated upon under sacral anesthesia; hence these untoward disturbances *cannot be attributed to* the anesthetic. Similar complications occurred in the cases in which nitrous oxide anesthesia was given. Ethylene and ether, of course, were not used.

Thrombophletitis was uncommon. It occurred in about two or three per cent of the cases.

The results obtained with diathermy alone have been extremely gratifying, particularly in view of the fact that in many cases involve-

ment is so extensive that radical surgery is difficult or impossible. For example, this form of treatment can be carried out where there is involvement of both ureters or trigone, or extensive involvement of the urethra.

The case with which this form of treatment can be carried out, other things being equal, gives it decided advantages over surgery. And this case of application furthermore is a distant advantage in the treatment of recurrences, no matter what the previous treatment has been.

HAY FEVER IN CHICAGO AND SUBURBS CLINICAL, FIELD AND AIR OBSERVATIONS*

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Our present approach to the therapeutic problem of hay fever necessitates a consideration of the specificity of pollens and plants. Since hay fever treatment implies the use of an extract of a pollen to which the individual is specifically sensitive it is important to determine which pollens are responsible for the symptoms. The practitioner is familiar with the use of diagnostic tests to determine this point. However, before skin tests are employed in the individual diagnosis one must have a fair conception of the types and abundance of hay fever plants in the community in which the sufferer lives. It may be that the pollen which gives the strongest skin reaction is present in the air in such small amounts as to be negligible, while the one that gives a weaker reaction may be present in great abundance.

The importance of having information about the types and prevalence of the hay fever plants in the locality in which one is to manage hay fever patients is thus evident. To obtain this data numerous surveys have been made in various parts of the country and also in a more meagre fashion in other countries. The details of such surveys can not be discussed here nor will general conclusions be considered. Although it has been known that a great variety of plants giving off pollen which are capable of producing hay fever are present in almost any district the tendency has been to emphasize only a few of these and to practically ignore the remainder. For example, in Chicago and in this part of the country the hay fever plants have been generally considered to be the short and giant ragweeds, timothy, red-top grass, orchard grass and bluegrass. It is not so well known that there are many other plants in the same district to the pollen of which the patient may be sensitive in addition to the usual plants or even separately from them.

A survey of a large territory, such as Illinois, furnishes a general idea of the hay fever situation in its components, such as Chicago, for example. In the first place, the climatic and soil conditions are generally similar, so that as a whole it is adapted to the same type of flora. In the second place, in the case of many of the plants, particularly the ragweeds, the pollens are carried for such long distances and are spread so diffusely that a local absence of these plants does not mean that the patient in that locality may not have hay fever from the transported pollens.

Nevertheless, a local survey of a territory of some 400 square miles, holding four million people, is also of great importance. Pollen of many hay fever plants is carried only for short distances. Even with the ragweeds on a quiet day the local variations in the prevalence of pollen may be of practical significance. In any community peculiar conditions may affect the type and abundance of hay fever weeds. The distribution may differ from one section of the city to another. As a matter of fact, we have found at times that the type of weeds growing in the vacant lot next to the patient's residence may materially affect him. In the past year one of us has made a weed survey in the neighborhood of each of his hay fever patients. One object has been to determine the proximity of heavy growths of hay fever weeds. The second object has been to determine the possible presence of hay fever plants which are generally regarded as of no importance because of their small numbers, but which might be of importance to a particular individual because of the close proximity of such weeds. For three or four

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Table I

EVALUATION OF HAY FEVER PLANTS IN THE CHICAGO DISTRICT

Compared with Short Ragweed

Common Name	Botanical Name	Relative Abundance of Plants	Relative Amount of Pollen Produced	Pollen in the air (Down-town)	Activity Shown by Skin Reactions	Frequence of Hay Fever Symptoms
RAGWEEDS						
Short Ragweed	Ambrosia elatior	100	100	100	100	
Giant Ragweed	Ambrosia trifida	75	200	100	100	100
Burweed Marsh Elder	Iva xanthifolia	60	75	2	73	
Cocklebur	Xanthium spp.	40	5	–	71	
MISCELLANEOUS WEEDS						
Lamb's Quarters	Chenopodium album	50	10	–	9	–
Russian Thistle	Salsola pestifer	10	5	–	23	3
Pigweed	Amaranthus retroflexus	25	5	– 1	15	–
Western Water Hemp	Acnida tamariscina	1	100	–	–	–
Hemp	Cannabis sativa	1	50	?	–	–
Sunflower	Helianthus annuus	10	5	0	–	–
Tall Wormwood	Artemesia candata	3	20	0	–	–
GRASSES						
Bluegrass	Poa pratensis	50	75			
Orchard Grass	Dactylis glomerata	5	150	–		
Timothy	Phleum pratense	5	100	– 8	51	48
Redtop	Agrostis palustris	20	50	–		
Canada Bluegrass	Poa compressa	50	50			
TREES						
Elm	Ulmus americana	5	20	4		
Cottonwood	Populus spp.	15	100	10		
Oak	Quercus spp.	2	100	16		
Ash	Fraxinus spp.	1	150	– 34	36	8
Maple	Acer spp.	1	40	–		
Tree of Heaven	Ailanthus glandulosa	3	10	–		
Walnut	Juglans nigra	–	100	2		
Hickory	Hicoria spp.	–	100	–		

Table 1.—The first two columns of this table are really little more than estimates, as there are no exact quantitative measures applicable. Figures in the third column are determined by atmospheric studies and the last two columns are from statistics discussed in the first section of this paper.

patients these neighborhood surveys have been of sufficient significance to influence the treatment and results.

Two hay fever surveys have been made of Chicago several years ago.[1, 2] Their pioneering import and informative data are appreciated by the authors of this paper. As time progressed, however, we have begun to feel the need of more extended observations. It was desired to have data on the type and abundance of pollen, its variation from one part of the city to another and its variations from season to season. In the previous surveys the suburbs were not considered and the trees were not seriously discussed. Another added stimulus in the present survey was the concept of a possible change in the flora that might be occuring over a number of years. Air studies of a more extensive nature and over several seasons have been added. In addition, we feel that the clinical observations recorded in this paper make the correlation of the field and air studies much more valuable and practical. This study will, therefore, be presented from three angles: clinical observations, field studies of hay fever plants and air studies of pollen.

Clinical Observations. In this brief analysis of information obtained from the observations on patients only those facts which deal with the types of plants and pollen causing hay fever will be considered. The data presented were obtained from the histories of the 150 most recent hay fever cases seen in private practice in Chicago. Only those patients residing in Chicago or its suburbs were tabulated.

Of this number 140, or 93.3 per cent, had hay fever in the ragweed season. In 80 of these, or 53.3 per cent, only ragweed hay fever was present. In 50, or 33.3 per cent, there

was an added mid-summer hay fever due to the grasses. Nine had hay fever in all three seasons and one in the tree and ragweed seasons.

In the entire series 68, or 45.3 per cent, had hay fever during the grass season. Of these only 9, or 6 per cent, had symptoms confined to the grass season. Fifty, or 33.3 per cent, were complicated by the fall hay fever and 9 had a combination of all three seasons—the tree, grass and ragweed.

There were 11 patients, or 7.3 per cent, who gave a very definite history of hay fever during the tree season. Only one had his symptoms confined to that season. In 9 instances the hay fever persisted from the spring to the fall. In one case the symptoms occurred during the tree and ragweed seasons, but skipped the grass season.

The above figures refer to the symptoms and seasons as elicited in the history of the patients. The relation of the skin tests to the clinical facts is also worthy of note. All cases of fall hay fever gave reactions to the ragweeds, although in one or two instances an intradermal test was necessary to produce the reaction. In a few instances the skin sensitivity preceded the onset of symptoms. Of these 140 ragweed-sensitive patients 102 reacted to burweed marsh elder and 100 to cocklebur. This indicates that there is some relationship between the active elements of short and giant ragweed pollen and those of the cocklebur and burweed marsh elder. Yet there were many instances in which, in spite of strong reactions to the ragweed pollens the burweed marsh elder or cocklebur reactions were entirely negative. This observation induces us to suspect that the atopen of the common ragweeds and these two ragweed relatives are not entirely identical.

Of the 68 grass cases cutaneous tests were positive in 63. In 3 instances intracutaneous tests were necessary to make a diagnosis, while in 2 conjunctival tests gave a positive reaction while skin tests failed to do so. In addition, there were 4 patients who gave strong reactions to grass pollens but who gave no history of hay fever during that season. In the majority of instances of grass reactions a positive test to one also resulted in a positive reaction to all of the important hay fever grasses growing here—timothy, June grass, redtop grass and orchard grass. In 7 instances, however, there were reactions to some of the grasses and not to others. This again casts some doubt on the conception that the active element in all the grass pollens is absolutely identical. It also suggests the inadvisability of treating all grass-sensitive cases with the pollen of one species of grass. It is interesting to note in this connection that Bermuda grass pollen, which is not to be found in this part of the country, gave a negative reaction in a fair proportion of the grass-sensitive cases.

A total of 54 patients, or 36 per cent, reacted to the pollen of one or more species of trees. Only 11 of these had definite hay fever during the tree-pollinating seasons. Many of the others may have had slight symptoms which apparently passed unnoticed, either because of their mildness or because of their short duration. Of the tree-sensitive cases 35 gave reactions to ash, 21 to cottonwood, 14 to oak, 14 to maple, and 3 to elm. The remaining tree reactions were not tabulated. The group which failed to react to the pollen of the above mentioned trees but reacted to the pollen of other trees constituted only 4 instances.

In this series of 150 hay fever patients 13 gave positive skin tests to lamb's quarter pollen, but the reactions were all weak, with the exception of one instance. In 21 there were positive reactions to pigweed, but these were all weak. In 32, definite reactions to Russian thistle were obtained. In several of these the reactions were quite strong. In a few the history and further observations indicated that there was actual clinical hay fever due to that pollen.

Field and Air Methods. Field observations in Chicago have been continued on the plan adopted by one of the authors eight years ago. The city is divided into square milesblocks, numbered as shown on Figure 1, and the results of all observations within each square mile are tabulated on a card index. The suburbs have all been visited at least once during the season. Atmospheric studies were made by the well-known gravity method. Vaseline-coated slides are exposed for 24 hours in selected locations and the pollen falling on the unit area (1.8 sq. cm.) is counted under the microscope.

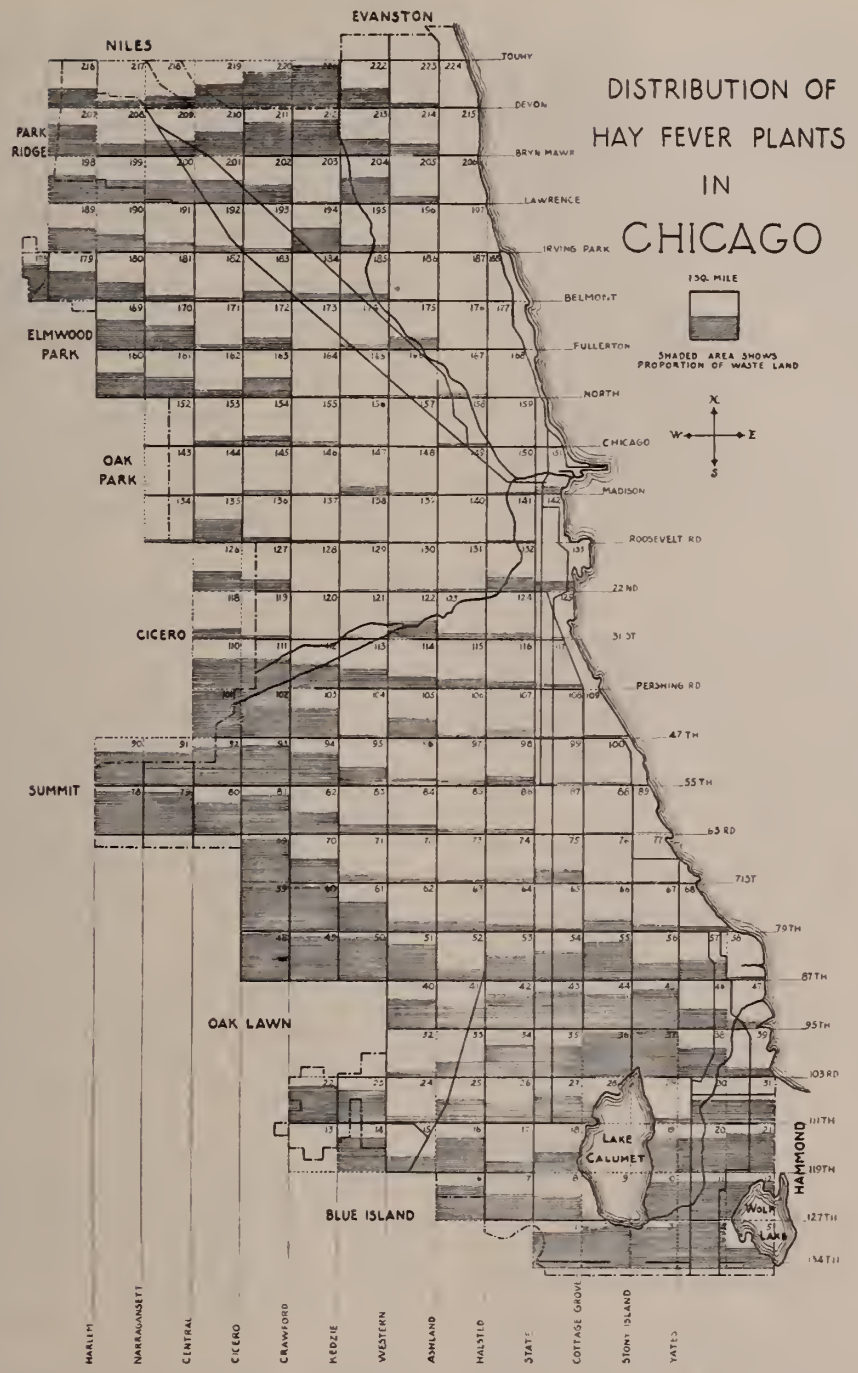


Fig. 1.—Each numbered block is a square mile, bounded in most instances, by highways. The proportion of weedy areas in each square is shown by the amount of shading. It will be noticed that the north shore is the most nearly free from weeds of any part of the City and that the south shore, between 47th and 75th, is almost weed-free. Detailed records for each square are on file.

OBSERVATIONS

The Chicago District: Half of the people in the State of Illinois live in an area of approximately one per cent of that state. If this one per cent area had no weeds at all, there would still be enough pollen throughout the Chicago district to cause severe hay fever symptoms. While much of the pollen in downtown Chicago is, of course, blown from the country, there is a crescent of neglected land around the city which is far weedier than the average farming district. The actual area of

neglected land within the city limits of Chicago amounts to about ⅓ of its total area. Within two miles of the Loop, along the canal, there are hundreds of acres of weeds.

The character of the city flora does not differ greatly from that of the country, except in the presence of a greater proportion of such trees as cottonwood and elm, which are widely used for street planting, and in the one characteristic Chicago weed, burweed marsh elder. The weediest area in the Chicago district is the region in the vicinity of Calumet and Wolf Lakes. The moist, sandy soil of this district is particularly favorable to the growth of giant ragweed, burweed marsh elder and Russian thistle.

Suburbs. Berwyn has many vacant lots and undeveloped subdivisions. In spite of local efforts at weed eradication, short ragweed is very common and giant ragweed abundant.

Blue Island is an industrial suburb with much vacant land, supporting heavy weed growth. Giant ragweed seems to be more common than short ragweed.

Brookfield has no large waste areas. Giant ragweed flourishes along the Des Plaines River. More grass than weeds in the subdivisions. Ragweeds predominate.

Calumet: This suburb has a great deal of waste land. Burweed marsh elder is the most common weed. There is also much giant ragweed and a great deal of Russian thistle. Very few trees.

Chicago Heights: This suburb is situated on the prairie where weeds are not especially abundant. Short and giant ragweed predominate, with some burweed marsh elder. One large waste tract on the east edge of the city.

Cicero: The southern part of this suburb is extremely weedy. Giant ragweed and burweed marsh elder predominate.

East Chicago, Indiana: The sandy land of this suburb is best suited to Russian thistle, which is doubtless of importance locally in hay fever. Besides Russian thistle, burweed marsh elder and tall wormwood are more common than short ragweed and giant ragweed. A very weedy city.

Elmhurst: A residence suburb with very few weeds.

Elmwood Park: Much vacant land; mostly grown to prairie grasses. Ragweeds common throughout.

Evanston: Many trees and a few weeds in the city. Ragweeds abundant on the west side of town.

Forest Park: A residence suburb with few weeds.

Gary, Indiana: Russian thistle is the most common hay fever weed in the sandy soil of Gary. Giant ragweed, mugwort and burweed marsh elder are also common.

Hammond: Much waste land. Russian thistle predominates. Burweed marsh elder and the two common ragweeds abundant.

Harvey: Considerable vacant land given to prairie grasses and a moderate amount of ragweeds.

Highland Park: Many trees but few weeds in the city. Many acres of giant ragweed in Skokie Valley, west of town.

La Grange: The city is not particularly weedy. Large tracts of waste ground south of town. The common ragweeds predominate.

Maywood: Much undeveloped area. Mostly prairie with moderate amount of ragweed.

Melrose Park: Undeveloped subdivisions, mostly in prairie. Weeds more abundant on the west side.

Oak Park: Very little vacant land and very few weeds.

Park Ridge: A residence suburb with moderate amount of weeds.

Riverside: Many trees on account of forest preserves surrounding the city. Weeds plentiful along the Des Plaines River.

Whiting, Indiana: Russian thistle predominates. The ragweeds, including burweed marsh elder, are also common, and there is some mugwort. A very weedy city.

Wilmette: A residential suburb with very few weeds.

Winnetka: A very few weeds in the city but many acres of giant ragweed in Skokie Valley, west of town.

Weeds. Short ragweed is found in all parts of Chicago. It is the most inescapable of weeds. Giant ragweed is the second most common weed in Chicago, usually appearing on vacant lots and on neglected parkways. If moisture is sufficient it will hold its own indefinitely against encroachment of grass. It is the most noticeable weed in Chicago. Bur-

weed marsh elder, a member of the ragweed family, is abundant in an area within ten miles of the Lake from Evanston to Gary. It is much more abundant now than it was eight years ago, but strangely enough, has not become common, except in the Chicago area, The moist, sandy soil on the lake shore seems to be favorable for its growth.

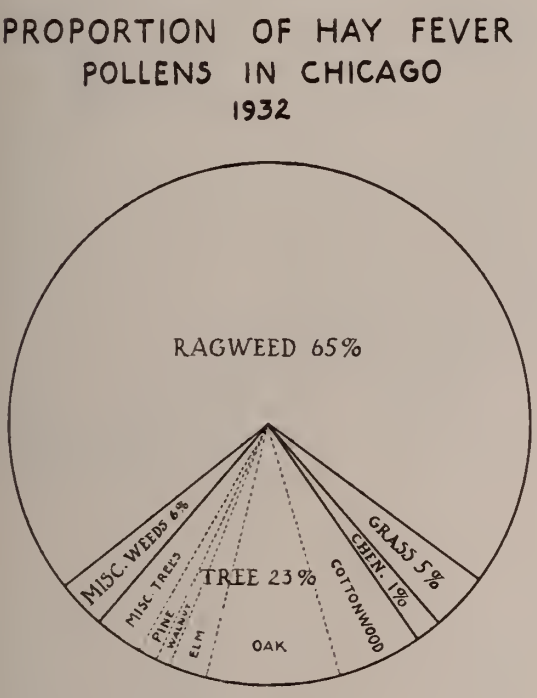


Fig. 2.—The data here shown were obtained from daily slides exposed from March 1 until September 30, 1932. The record is for pollens falling out of the upper air into the Loop. The slides were exposed on the Federal Building by the U. S. Weather Bureau.

Strangely enough, this third most common hay fever weed in Chicago does not contaminate the upper air. Pollen slides exposed near the ground near burweed marsh elder patches gather enormous quantities of the pollen, but slides exposed throughout the season in residence districts and in the Loop prove that the upper air carries a total during the ragweed season of only one per cent of burweed marsh elder pollen.

Cocklebur, also a ragweed, is found throughout the city and is very abundant west and south of the Loop, and its role in hay fever is still uncertain. Lamb's quarter is very common in all parts of Chicago and suburbs. It is most noticeable in the late fall. Very little of its pollen is found in the air, and is evidently of very little importance.

Pigweed is found in rich waste soil. The pollen is not abundant and, hence, is of little importance. In Chicago, sunflowers are abundant in large areas south of the Chicago River and Canal. The pollen is never found in the air, but since there is some possibility of artificial contact and since the pollen is known to be toxic, sun flowers should not be overlooked as a local possible factor.

Western water hemp is common and increasing in the stockyards district, but can not be regarded as sufficiently abundant to be more than a rare and extremely local factor. Hemp (*Cannabis*) is found in a few places on the south side and is abundant in squares No. 99 and 100, east, and north of Washington Park.

Grasses. Bluegrass is the principal source of grass pollen in the Chicago area. It is not the most abundant producer, but enjoys the greatest acreage. Many of the prairies on the west and south sides are covered with quack grass and Canada bluegrass. The former is a small producer of pollen, but the latter doubtless contributes a considerable share of the pollen in the air during July. Among these prairie grasses there is usually more or less short ragweed. Orchard grass, which pollinates just after bluegrass, is very abundant in several suburbs. There are usually two seasons of grass pollen, the first and severest season during early June, due to bluegrass and orchard grass, and the second during late June and early July, due to Canada bluegrass, timothy and redtop.

Trees. Cottonwood is much more common in Chicago than any other tree. This is because it is the favorite street tree. The pollen is very abundant, but not so light as that of some of the other trees. Slides exposed in the residential districts show that, with the exception of oak, the cottonwoods produce more pollen than any other tree. Elm is widely distributed, but used for the street trees along boulevards and for extensive plantings in parks. It is the earliest tree producing windborne pollen in abundance. Ash trees mature a great deal of pollen, but they are much less frequent than elm or cottonwood, and the regular slides catch only a small amount of the

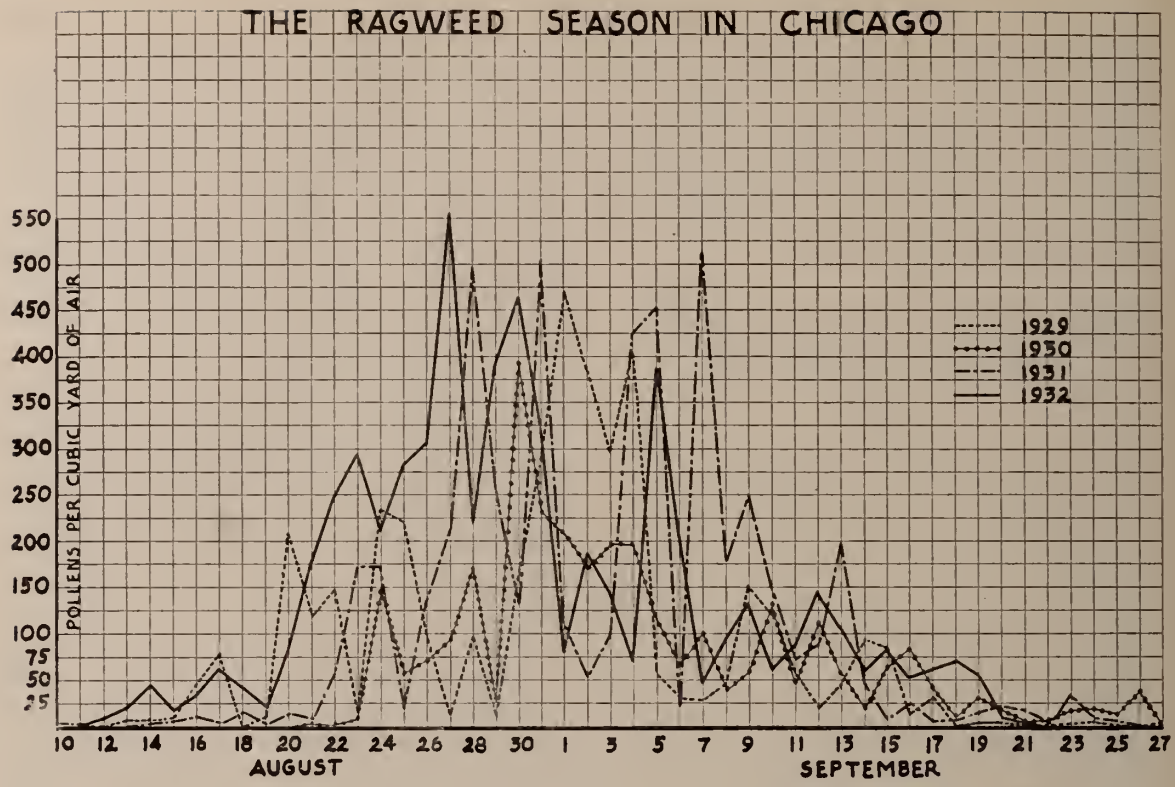


Fig. 3.—Ragweed records as obtained from daily slides exposed on the Federal Building in the Chicago Loop by the U. S. Weather Bureau. It will be noticed that the onset and apex of the season vary considerably more than do conditions during the last two or three weeks of the season.

pollen. The importance of the pollen has been noted. Oaks are not common in the city, except in natural parks, but the numerous forest preserves of Cook County contain a great many oaks. Oak pollen is the most abundant pollen in the air and the season is longer than that of any other tree. Tree of Heaven is found in many places as a yard and street tree. It is especially common on the south side. The pollen, though meager in amount, has been reported to give skin reactions in hay fever. Its importance in Chicago has not been investigated. Willow and maple, including box elder, are possible offenders.

Table 2

TOTAL SUMMER RAINFALL AND TOTAL RAGWEED POLLEN CROP IN CHICAGO

Year	Rainfall	Pollen
1929	10.6 in.	4132
1930	6.29 in.	3046
1931	9.8 in.	5018
1932	12.54 in.	6020

Table 2.—The rainfall figures are for June, July and August. It will be noticed that there is perfect correlation between the yearly fluctuation in rainfall and the yearly fluctuation in the total ragweed pollen crop.

Atmospheric Studies. Since 1928 numerous atmospheric investigations have been made in Chicago and suburbs. Slides have been exposed in a number of residential locations throughout the ragweed season. A few series of slides have been exposed from early spring until late fall. The pollen content of the air in the city is much lower than that of the remote suburbs, but there is very little difference in the daily fluctuations of the pollen content of the air and of the the Loop. Exposures in the Loop are made seasonal totals in the residential districts and on the Federal Building by the observers of the United States Weather Bureau.

The amount of pollen in the air varies from year to year, depending upon weather conditions favorable or unfavorable to the growth of vegetation. The drought of 1930 produced a ragweed pollen crop in Chicago, as in all surrounding large cities, about 50% less than average. The ragweed pollen crop of Chicago, as measured in the Loop, is about the same as that of Cleveland and Detroit, somewhat less than that of St. Louis, much less than

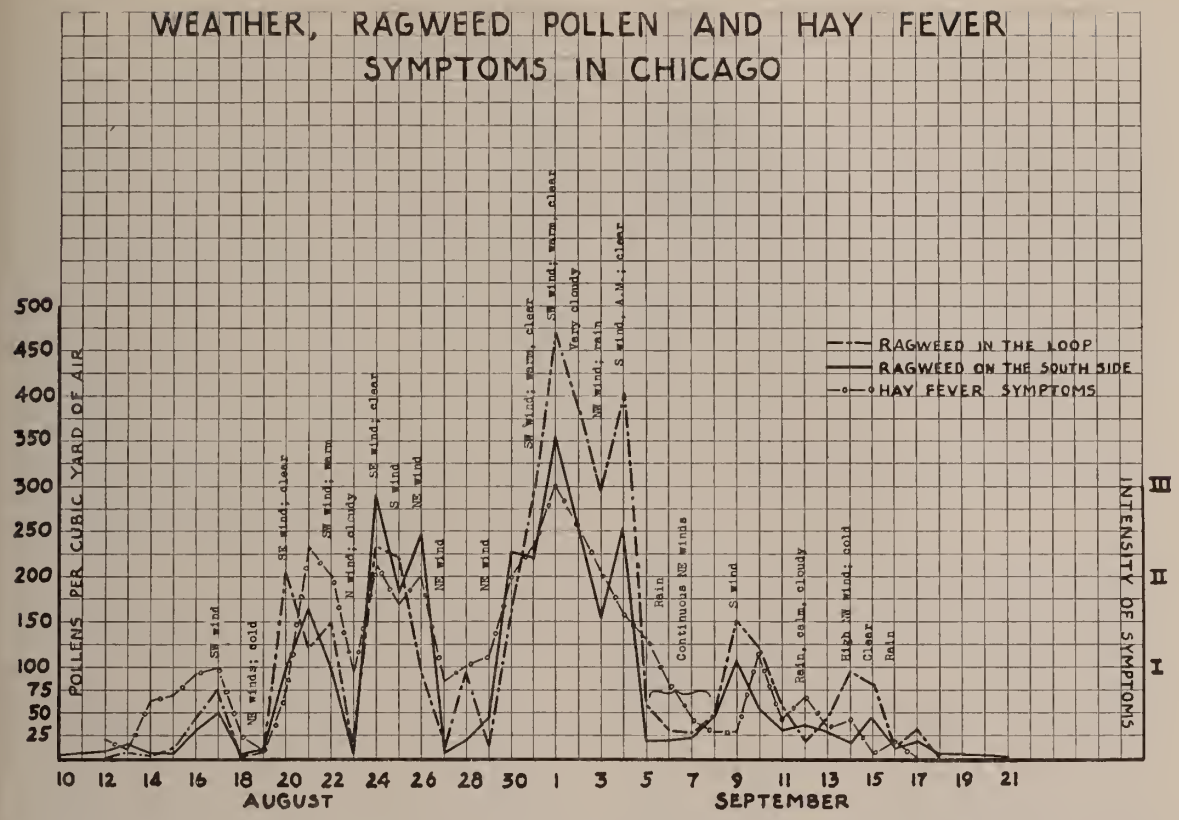


Fig. 4.—This graph shows the effect of weather on the pollen content of the air and the resulting fluctuation of hay fever symptoms in sensitive persons. The down-town slides were exposed on the Federal Building and counted by O. C. Durham. The south side exposures were made 8 miles from the Loop, at 6815 Merrill Avenue, and the counts made by S. M. Feinberg. The striking correlation in quantities and fluctuations shows that atmospheric contamination was decidedly uniform. The symptom curve is based on the number of patients reporting symptoms and the comparative severity for each day.

Indianapolis, and three times as much as New York. Daily fluctuations are effected by wind velocity, but much more by wind direction. Southeast, south and southwest winds result in high pollen counts, while north and northeast winds off Lake Michigan often cause abrupt and extreme drops.

The severity of the oncoming ragweed season may be predicted from a study of total rainfall during the summer. Close observation of wind direction in Chicago is well worth while. Daily weather predictions including wind direction may be secured either by direct communication with the weather bureau or from published reports. From these the probable degree of suffering or the necessary modification of treatment and advisable activities for the patient for the day can be determined.

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DETERMINATION

It's plugging away that will win you the day,
So don't be a piker, old pard;
Just draw on your grit, it's so easy to quit,
It's keeping your chin up that is hard.

It's easy to cry that you're beat, and die,
It's easy to crawfish and crawl;
But to fight and to fight, when hope's out of sight,
Why, that the best game of them all.

And tho' you come out of each gruelling bout
All broken, beaten and scarred,
Just have one more try—it's dead easy to die—
It's the keeping on living that is hard.

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BOTULISM*

William E. Cary, M. D.
CHICAGO

There are two major types of food poisoning recognized today. The more common, but fortunately the less serious, is characterized by symptoms of abdominal cramps, nausea, vomiting and diarrhea which usually develop from 30 minutes to 5 or 6 hours after eating food in which either certain types of living bacteria or their products of growth are present. Nearly every adult has at some time suffered from such an attack, which usually lasts only a few hours. This is the type of food poisoning commonly but erroneously called ptomaine poisoning.

The second type of food poisoning, botulism, which we are to discuss, is relatively uncommon but is so frequently fatal that it assumes an importance greater than its indicated prevalence. Furthermore, it is so easily prevented that a general knowledge of the preventive measures should be known.

The disease is caused by botulinus bacillus, which is so named because it was first connected with poisoning from sausages. This organism produces heat resistant spores which are commonly found in nearly any soil sample. It lives without air and will not grow in free oxygen. It has the further characteristic of producing in its growth a specific true toxin or poison. It is due to these characteristics of the organism that it finds its most favorable conditions for development in canned foods, i.e., absence of free oxygen in the sealed can and sufficient food for growth. The first characteristic we mentioned, that of the production of heat resistant spores, makes it essential that temperatures above boiling be used in safe preserving of meats and vegetables. The commercial canners have long recognized this fact and by careful processing at temperatures higher than boiling have been successful in preventing any outbreaks of botulism in the United States from their products since 1925.

On the other hand, since the vogue for cold pack home processing which developed during the world war and which makes use only of boiling temperatures, there have been frequent outbreaks every year, chiefly caused by non-acid vegetable products, and resulting in 25 to 100 preventable deaths annually. The most disastrous recent outbreak occurred at Grafton, North Dakota, in which 13 out of 16 adults died after attending a party and eating a salad made from home canned cold packed peas, beans and carrots.

Acid products such as fruits may safely be canned at boiling temperatures because the botulinus bacillus will not multiply and produce its poison in an acid medium; but it cannot be too strongly or frequently emphasized that the cold packing method as applied to vegetable or meat products is potentially highly dangerous. Home pressure cookers, properly used, which give a temperature to 240° F. are safe for the home canning of vegetables or meats.

The symptoms of botulism occur in nearly 100% of all who eat the poisonous food. About 65 to 75% of all who become ill, die. The illness develops usually from 1 to 4 days after the meal and death occurs painlessly from 2 to 4 days later. The symptoms are marked prostration and fatigue, double vision, drooping of the eye lids, difficulty is swallowing or talking, dryness of the mouth, and finally marked difficulty in breathing. Death is due to respiratory paralysis. A small percentage have nausea and vomiting. Constipation, normal temperature and freedom from pain are the rule.

In such a serious disease what can be done to prevent it? First and foremost, use a pressure cooker if non-acid meats or vegetables are to be home canned, being sure to let the air escape from the cooker so as to get 15 pounds of steam pressure. This should be maintained for at least 30 minutes.

Second, discard any cans which after storage show evidence of pressure, i.e., bulging ends or spurting of juice when opened. The botulinus organism produces gas in its growth and hence causes increased internal pressure or bulging. Cloudy liquid should also arouse suspicion and usually indicates spoilage. Not all swelled cans, of course, contain botulinus toxin.

Third, smell but do not taste the contents of the opened can. The botulinus bacillus usually produces a cheesy odor. Death has been reported from tasting a single bean from

*(Radio talk given from WJJD February 13, 1933 for Educational Committee.)

a poison-containing can. Any contents with an abnormal odor should not be eaten.

Fourth, boiling for 10 or 15 minutes destroys the toxin and renders the food practically safe. The spores, to be sure, are not killed but are harmless when eaten. It is the poison produced by the bacillus in growth, not the spores or bacillus itself, that is poisonous.

Fifth, a specific antitoxin is available but is of little or no value after symptoms have developed.

Sixth, do not destroy remnants of suspected foods but hold them in the ice box for your doctor. The toxin can be readily identified from the food by laboratory procedures.

104 South Michigan Avenue.

OPHTHALMOLOGIC PROBLEMS IN GENERAL PRACTICE*

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CHICAGO

The evolution of educational methods is startling. In our childhood days we learned first the letters of the alphabet and then the construction of words and sentences. Now, children are first taught to read and a knowledge of the alphabet is acquired at the same time. Likewise, in music, modern methods take the beginner into exercises and simple compositions while the scales are learned separately. However, the opposite prevails in medicine where we have gone from the early preceptorship days when the student was introduced almost at once to major problems of obsteterics, internal medicine, surgery, etc., to the present time when basic sciences and elementary problems are stressed for several years before the student is even indulged with patients in clinical work. Medicine has grown to such proportions that it is of paramount importance to be thoroughly familiar with elementary principles in the various branches in order to understand the symptomatology of a case, and this holds true especially in the field of ophthalmology. The medical curriculum contains such few hours for the subject of ophthalmology and the man in active general practice covers so many major fields such as obstetrics, gynecology, internal medicine, urology, etc., that even if he had time to delve further in the field of ophthalmology, he would be without the necesary foundation with which to interpret and evaluate the patient's complaints with any degree of skill or assurance.

In order to have a vivid panorama of the high spots in the specialty and to retain the utmost, ophthalmologic problems will be considered from the standpoint of age periods of life going from infancy to senility. With this plan in view, the various problems fall into the following age groups:

1. Birth to five (pre-school age).
2. Five through puberty and adolescence (school age).
3. Adolescence to middle age.
4. Middle age to sixth decade.
5. Old age and senility.

Although this is rather arbitrary and the several conditions overlap into the different ages, it helps to fix in one's mind the certain problems as they appear in a definite period in the span of life.

GROUP 1—BIRTH TO FIVE (PRE-SCHOOL AGE)

Ophthalmia Neonatorum: Beginning with the infant as it has made its safe journey through the birth canal, one's thoughts naturally turn to the security of the mother. After the cord is cut the placenta must be expelled. The name of the illustrious gynecologist Credé comes to mind, for one often resorts to his method in expressing the after birth. This same Credé gave to the world one of its greatest blessings when he introduced his prophylactic treatment against ophthalmia neonatorum. Up to that time in his own clinic in Leipzig, he had an average of over ten per cent of cases of gonorrheal ophthalmia in the whole number of newborns, and since a large percentage of infants were born outside the institutions and were affected with gonorrhea, the percentage of infections mounted in appalling number. That the prophylaxis which Credé introduced is effective is shown by the fact that after its introduction, the figures in his own clinic dropped to 1 per cent, and the same results were noted the world over. Regarding the disease ophthalmia neonatorum, it makes its appearance about the third day after birth. As the child's head passes through the vaginal tract the eye lids are covered with secretion contained in the latter and this penetrates quickly into the conjunctival sac. The lids be-

*Read before the Iroquois and the Du Page County Medical Societies.

come swollen and there is a profuse purulent discharge. Most of the pathology is in the palpebral conjunctiva, the cornea being quite resistant. Only when the cornea is injured does ulceration develop, and this brings forcibly to one's attention the treatment which must be so gently and carefully done so as not to traumatize the cornea. The slightest abrasion of the latter with a cotton applicator, an irrigating tip or instrument leads to disaster and even under the strictest control and excellent care many of these eyes are lost. An important point to bear in mind is the fact that even though the prophylaxis has been resorted to, the baby may subsequently develop gonorrheal ophthalmia, a week or two after birth. These cases may be due to contamination from an infected nurse or mother who are careless in the manner of caring for themselves while harboring a Neisserian infection.

We occasionally see a gonorrheal conjunctivitis in an adult. If the eye contamination occurs when the patient has his urethritis for the first time, the eye affection is quite malignant. However, if it occurs in the course of a recurrent urethritis after the patient has developed some immunity to the disease, the eye complication is relatively benign, provided, of course, that the cornea remains uninjured. On virgin soil the virulence of a gonorrheal contamination is without equal.

Dacryostenosis: While on the problem of conjunctivitis, one often finds its presence in a baby and in a very resistant form. Regardless of the countless remedies used, the baby continues to have pus in the palpebral fissure, together with epiphora. In these cases one usually is dealing with a stenosed tear duct and an infected tear sac. Especially is this true if the condition is unilateral. The tear duct is formed by an extension down from the sac and a continuation up from the nose. At a point where the two channels meet, sometimes the thin diaphragm composed of several layers of cells fails to break down and so the nasolacrimal duct remains obstructed. The tear sac soon becomes infected and this keeps up a chronic conjunctivitis. By exerting pressure over the tear sac one can express a considerable amount of mucopus through the puncta. At times pressure over a filled sac may be sufficient to cause the thin diaphragm to give way and the duct becomes continuous. However, it is usually necessary to pass a lacrimal probe and to break through the layers of cells which obstruct the canal, and the troublesome dacryocystitis with its accompanying conjunctivitis quickly disappears.

Cataract: There is quite a variety of congenital cataracts, and the classification follows the location of the lens opacities. A small white dot is sometimes seen at the anterior pole of the lens; this is due to an opacity just beneath the anterior capsule and is called anterior central capsular cataract.

This type is also acquired in a perforating ulcer of the cornea which allows the aqueous to escape and permits the lens to come in contact with the suppurative cornea. The toxemia affects the subcapsular cells and opacification follows.

A small white dot on the posterior pole of the lens usually represents the remains of the hyaloid artery at the point of attachment to the posterior capsule of the lens. It causes very little interference with vision and is left alone. The acquired form of posterior polar cataract is seen in high myopia, choroiditis and retinitis pigmentosa.

Complete cataracts are seen at birth or are acquired. The former are due to developmental disturbances or to intrauterine ocular inflammation. In the acquired forms, which are as a rule bilateral, there is a history of convulsions and these children show signs of tetany and rickets.

Another type of cataract that one sees in children is due to direct trauma, either a perforating wound of the lens capsule or contusion of the eyeball.

Cataracts that are complete whether they be congenital or acquired should be operated upon as early as possible for we know that an unstimulated retina results in its arrested development with poor vision. The operation of discission or needling can be performed in the first few months of life.

Degenerative Diseases: Of the degenerative diseases, though quite rare, most physicians are familiar with amaurotic family idiocy, Leber's disease, and various forms of xanthomatosis, a disease of lipoid metabolism which was so thoroughly described by M. C. Sosman (J.A.M.A. 98:110 (Jan. 9) 1932). Since the

latter condition has been studied by general practitioners, roentgenologists, pediatricians, internists, neurologists, etc., one can see that its symptomatology might come under the category of almost any specialist and it would be well for everyone in practice to familiarize himself with the various manifestations of the disease.

Avitaminosis: Much has been written of late on vitamines, and the relationship that exists between dietary deficiencies and certain diseases is recognized. Without going too deeply into the problem, suffice it to say that a lack of vitamin A in the diet will produce certain eye changes. It is well known that the retina as well as the liver stores vitamin A. A deficiency of this vitamin affects epithelial tissues in a specific manner. G. B. Eusterman and D. R. Wilbur (J.A.M.A. 98:2054 (June 11) 1932) show that there is a substitution of stratified keratinizing epithelium for normal epithelium in various parts of the respiratory, alimentary, and genitourinary tracts, in the eyes and para ocular glands. Thus the maintenance of intact healthy epithelial membranes which constitute the first line of defense against bacterial invasion is a prophylactic function of this vitamin. Since the newborn infant's liver contains little or no vitamin A, it is essential that the mother be given a generous supply of this vitamin during the prenatal and lactation periods. Vitamin A is derived from milk, butter, cream, egg yolk, cheese, liver, kidneys, cod liver oil, carrots, cabbage, spinach, tomato, bananas and turnip greens. The most common eye disorders due to deficiencies of vitamin A in the diet are 1. nyctalopia or night blindness, and 2. xerophthalmia, xerosis and keratomalacia, all of which have to do with changes in the epithelium of the eyeball and para ocular glands.

Tumors: Intraocular tumors are rare; they may be primary or metastatic. The latter will be described later together with the usual adult type of tumor, namely, sarcoma. The malignant growth found only in childhood and usually under five years of age is the glioma (neurocytoma) of the retina. It may occur occasionally in successive children in the same family. We recognize three stages in the symptomatology of gliomas of the retina. In the first stage the inflammatory symptoms are absent and one sees a yellow reflex through the usually dilated pupil; which has been called amaurotic cat's eye—amaurotic because the eye is blind, and cat's eye because like a cat it shines in the dark. The second stage is inflammatory, the eye becomes irritated, painful, and there is an increase in tension. In the third stage the tumor has broken through the eyeball finding its way along the optic nerve to the brain, and through the cornea involving all the neighboring structures. The eye now becomes transformed into a large ulcerated painful mass which fills the whole orbit. Death occurs from intracranial involvement. Metastases are uncommon. In contrast with sarcoma, which metastasizes early but remains localized for some time, glioma extends along the optic nerve to the brain rather early but metastasizes very late.

Squint: Going now to a less morbid subject but one which is most vital to the welfare of the child, we approach the problems of squint which in the minds of many physicians are veiled as with a fog; their advice to questioning parents regarding the proper course of treatment is often harmful, especially in those early years when acute vision is in process of development. As W. W. Lewis has stated, (Minnesota Medicine, 10:726 (December) 1927) "squint in children brings not only grief to parents, unhappiness to the child, and a humiliating self-consciousness to the youth, but also a most positive and heavy handicap to the adult, socially and vocationally." This problem affects also those children who come under the second age group of cases, from five to puberty, and so we bridge the gap smoothly in ophthalmic problems of the first and second groups.

GROUP 2—FIVE THROUGH PUBERTY AND ADOLESCENCE (SCHOOL AGE)

To fix more firmly in one's mind the reason for certain procedures in the treatment of squint, it will be profitable to review several of the fundamental factors pertaining to vision. In the lower forms of life the eyes are placed laterally and there is complete decussation of the optic nerves. Such an eye has no fovea and so central vision or detailed vision is lacking. Animals, therefore, rely on the other senses in order to survive, for having no binocular vision their sense of distance and depth per-

ception, together with the clearness of the object, is missing. Besides, laterally projected vision makes for greater protection since an animal can more readily see a moving object at its sides than if the eyes were in the frontal plane. Although lateral sight, as far as protection was concerned, became less necessary as man emerged from the jungle, and this latter fact holds true for the other sense organs as well, his social and intellectual make-up as civilization progressed, forced upon him the need for acute vision. Tilling the soil, making of implements and secure structures of habitation from the elements and prey with which he was surrounded, the development of a language with its signs and symbols all participated in the evolution of the macula, which is the area of direct or acute vision. Man's visual needs grew as he continued upward in the social and intellectual order of things. With the intelligent appreciation of his environment and the development of the arts and culture from his primitive existence to his present estimation of the higher things that time has brought, the evolution of the eye can be more critically evaluated, laterally placed in the lower forms for protection to that frontally placed human eye for acute vision, binocular in character with its depth perception and finer differentiation. Phylogenetically, macular or central vision is a relatively late acquisition.

The chief element in perfect binocular vision is fusion, the ability to fuse two corresponding retinal images into one, and our eyes are so placed in the frontal plane that rays of light entering them fall upon corresponding parts of each retina. Binocular vision is also a relatively late phylogenetic acquisition and is therefore a function that is easily upset. It is only when there is a great inequality of vision that squint appears, either in or out as the case is far sighted or near sighted. It is believed that squint is due to a loss of the fusion faculty. When images are unlike and unfit for combination, the eyes adjust themselves by disregarding the poorer image and so one eye, namely the better seeing eye, is used almost exclusively. The poorer eye deviates and squint therefore is a way out of a difficulty. This is accomplished by turning the poorer eye so that the image received by its macula in the new position is out of focus and blurred. Diplopia results when non-identical areas in each retina are stimulated and the child quickly learns to suppress the false image. Therefore, in the usual squint case, excepting paralytic or alternating squint, one eye has much less acute vision than the other. The squinting eye in hyperopes usually turns in, since the adductors are much stronger than the abductors. In myopia though, the squints are divergent since the adductors are quite weak. Alternating squint, according to R. I. Lloyd (Arch. Ophthal. 7:934 (June) 1932), seems to be a congenital defect of the nerve control of the ocular muscles. These cases usually have good vision in each eye. Children as a rule are born far sighted and when their hyperopia is of a marked degree much accommodation must be brought into play in order to see clearly, especially for near. We know that convergence is so intimately associated with accommodation that these children who have a non-stabile fusion faculty are unable to control the strained convergence in excessive accommodation and so these eyes cross over. In other words, the excessive accommodation causes an overbalance of the convergence. A word of caution here; one must not confuse squint with a seemingly turned in eye in a child with a marked epicanthus.

The treatment of squint follows according to the type with which one has to deal. Where one eye has poor vision, perhaps due to an abnormal amount of astigmatism, refraction under atropine cycloplegia with prescribing of glasses will often suffice. For the paralytic type of squint prisms and surgery after the lapse of at least a year might be necessary. For the alternating type of squint with high hyperopia, refraction under atropine cycloplegia with prescribing of glasses is the proper procedure. This will correct the excessive accommodation and will release the strained convergence. Then, too, one must resort to fusion training with the stereoscope or amblyoscope. When glasses and orthoptic training fail to produce the necessary result, surgery is resorted to and its successes lie not only in the improvement of the cosmetic appearance of the child, but the eyes early are given an opportunity to function properly by developing the fusion.

Leaving for our final remarks on squint the

vital fact that the macula with its acute vision is not fully developed at birth but reaches its complete development as the child grows to about the age of seven years, one must appreciate the great need of having these little eyes examined and treated early, for the growing eye turned either in or out fails to develop its macula, fails to attain maximum vision and the child has been robbed of its binocular acute vision with depth perception and appreciation. Infants tolerate glasses remarkably well and they can be prescribed for babies a year old.

Refraction: In the subject of refraction, the problems of eye strain and poor vision present themselves. These symptoms may be due to far sightedness, near sightedness or astigmatism. Far sighted people and those with astigmatism have the symptoms of headache, eye strain, etc., which come on, as a rule, about midday and are aggravated as the eyes are used. 20/20 vision does not mean emmetropia for the patient may be accommodating even for distance. The myope sees poorly in the distance, has a weak accommodation mechanism and has no symptoms other than poor vision. Salient points to remember regarding the eye are as follows: 1. Children as a rule are born hyperopic. 2. The hyperopic eye tends to improve with advancing school age. 3. The myopic eye tends to grow worse with advancing school age. Both types should wear glasses, the far sighted individual to be relieved of symptoms and the near sighted person to be given normal vision. The latter should always be fully corrected so as to prevent as much as possible the increasing myopia as the eye-ball is growing. Myopia as a rule comes to a standstill when maturity or full growth is attained. The ophthalmologist's opinions regarding the wearing of glasses must be definite. The usual young hyperope should never be fully corrected and one should give only enough correction to relieve symptoms just as one would prescribe any other form of medication. It should be a pleasure to take glasses away from a patient when they are not absolutely indicated even though the patient may have worn them for several years.

Interstitial Keratitis: During the school and adolescent years, one sees most of the cases of interstitial keratitis. The points to remember about the disease are as follows:

1. The etiology is as a rule inherited syphilis.

2. Though it affects the children of syphilitic parents, it does not pass to the next generation.

3. It usually affects both eyes, though there may be an interval of months or years in the involvement of one eye and the other. The eyes as a rule are attacked in succession rather than both at once.

4. Though the symptoms might be severe there is no corneal ulceration.

5. The prognosis is unfavorable regarding the duration, sometimes the disease drags on for months and years, but the ultimate outcome is as a rule favorable because in the greater number of cases good vision finally returns.

GROUP 3—ADOLESCENCE TO MIDDLE AGE

In the period from adolescence to middle age, our problems are those which occur in the course of occupations, constitutional diseases, blood dyscrasias, complications of pregnancy, etc. Eye injuries, especially the perforating types, should be treated by an ophthalmic surgeon. For the general man who studies fundi faithfully, the ophthalmoscope reveals to him the key to the diagnosis of various constitutional disorders, furnishes to him indications for treatment, besides enhancing his judgment regarding prognosis. In no other part of the body can the physician observe directly the internal anatomic structures which the eye presents, such as the nerves, blood vessels, media, etc., or the pathologic processes such as hemorrhage, exudation, atrophy and edema. Since the eye is so sensitive to systemic disorders, it reflects directly the manifestations of active general inflammatory processes. In studying fundi one is impressed early with the many normal variations which one sees, and before one can correctly interpret a fundus picture, there must be considerable training in ophthalmoscopy. The more one examines fundi, the greater will be his ability in differentiating the normal from the abnormal. In order to pass judgment accurately, the pupil should be dilated with either euphthalmine or homatropine so that the periphery of the fundus can be easily visible. Among the common conditions which one sees are: 1. The various forms of vascular changes; 2. Exudation and

hemorrhage in the retina or choroid; and 3. Pathology of the nerve head.

In hypertension, the arteries are narrowed, show a marked light reflex and are tortuous, especially in the region of the macula; and arteriovenous compression which is an apparent interruption of the venous circulation where the arteries cross over the veins, is present. Arteriosclerosis manifests itself by a much narrower arterial light reflex than in simple hypertension, due to the thickening of the vessel wall. The arteries at times appear irregular in caliber due to the unevenness of the thickening in the proliferative process. The arteriovenous compression is more marked and the arteries often cross the veins at right angles rather than at obtuse angles as normally prevails. A sudden loss of vision in one eye often means a hemorrhage in the macula, embolus of the central retinal artery, and thrombosis of the central retinal vein. In embolus of the central retinal artery, one finds the retina very anemic, and the arteries greatly reduced in size. In the region of the macula one sees a cherry red spot which represents the color of the choroid, and it is seen in this area because of the absence of some of the retinal layers. Emboli are more commonly seen in the left eye and are found especially in heart lesions such as vegetations in endocarditis. Thrombosis of the central retinal vein or one of its branches produces stasis which results in extensive retinal hemorrhage. Secondary glaucoma is a frequent sequel to this condition. The end result is usually atrophy of the retina and optic nerve.

Retinal exudates and choroiditis are manifestations of toxemia. In this condition the exudates occur in the neighborhood of blood vessels and are accompanied by hemorrhages in the retina. Diabetes and nephritis are common causes and the pathology is most extensive in the region of the nerve head and the macula. Choroiditis manifests itself pathologically by changes in the fundus, often in the periphery as well as the posterior pole. The lesions are not accompanied by retinal hemorrhages but one often sees pigment changes. The common causes are syphilis and tuberculosis, though focal infection must always be borne in mind.

Optic neuritis manifests itself by loss of vision, the margin of the disc is rather hazy, the nerve head is somewhat elevated and hyperemic. Papilledema or choked disc presents a well defined nerve head, not as hyperemic as in retinitis, the elevation may reach several diopters, and the vision remains good for a considerable length of time. This latter symptom easily differentiates a papilledema from a neuritis. Choked disc occurs in brain tumors in the majority of cases, especially in the cerebellopontile angle and cerebellar types. Optic atrophy may be primary or secondary. The former is seen in syphilis, following injury to the nerve in basal skull fractures involving the orbit, and in tumors of the hypophysis which produce compression atrophy. In these cases the nerve head is atrophic while the rest of the fundus is practically normal. Secondary atrophy, on the other hand, follows optic neuritis, retinal and choroidal disease or pathology in the vascular tissues of the eye and the pathology will be seen not only in the disc but also in the fundus.

GROUP 4—MIDDLE AGE TO SIXTH DECADE

The problems which arise between middle age and the sixth decade are those of presbyopia or loss of accommodation which comes on at about forty, the degenerative diseases cardiovascular-renal in character which produce fundi changes, intraocular tumors, glaucoma, lues, etc. Of these, perhaps glaucoma should be emphasized since it is more common than is generally supposed, and many cases of unexplainable headache are due to unrecognized glaucoma of the simple type. Those who examine fundi see many cases of physiologic cupping and the point to remember is that in this type the cupping is somewhere near the center of the nerve head and represents a funnel-shaped depression formed by the separation of the optic nerve fibers. The cupping does not extend to the margin of the disc. In atrophic cupping, seen in various forms of optic nerve atrophy, the disc is shallow and flat and the edges are quite distinct. The lamina cribrosa is visible. In primary atrophy the retina and blood vessels are unchanged. Glaucomatous cupping extends to the very margin of the disc. The vessels are seen to bend over the edge, disappear and make their reappearance at a greater depth in the excavated nerve head. The tension in simple glaucoma is variable at different times of the day, being highest in the early morning hours around

five o'clock, and lowest toward noon, so that simply taking the tension by touch or even with a tonometer at one examination when glaucoma must be ruled out, is not sufficient. Various tests and examinations are resorted to and the pressure is measured at various time intervals in order to either rule out or diagnose the disease definitely. Acute congestive glaucoma is often ushered in with a gastro-intestinal upset of nausea and vomiting and the patient may have pain in the precordial area simulating an angina. However, the acutely inflamed eye with its steamy cornea, shallow anterior chamber, dilated pupil and hardness to touch, should be familiar to all. The common confusion of acute congestive glaucoma lies with an iritis, but the treatment of the latter is so destructive to a glaucomatous eye, and since the time element in an inflammatory glaucoma is so important from the standpoint of destruction of vision, that it behooves everyone to be able to differentiate the two conditions readily.

Malignancy: In this period of medicine when there is a great deal said and written regarding cancer, one might pause for a consideration of a few facts of this disease as they pertain to the eye. Sarcoma is, of course, the commonest primary tumor and it finds its origin most often in the choroid. Tumors metastasize to the eye as well as to other organs but the circulation to the eye explains the rarity of metastases. First of all the left eye is more involved than the right because the left common carotid comes directly off the aorta, while the right leaves the inominate at an obtuse angle. This anatomical fact also explains the greater number of emboli to the left side of the brain than to the right. The rarity of metastases is explained by the fact that the ophthalmic artery comes off the internal carotid at a right angle and this allows the carcinoma cells or emboli in the carotid to readily pass the narrow ophthalmic ostium and continue up to the brain.

GROUP 5—OLD AGE AND SENILITY

Cataract: One comes now to the stage in life when the sense organs in general begin to suffer and the picture which these people present with non-seeing cataractous eyes is pitiable.

It is indeed remarkable how well diabetics tolerate intraocular surgery, and with newer methods of diet and insulin therapy these patients can be brought quickly to the proper state for surgery. Healing takes place in the usual course of time but it has been noted that intraocular hemorrhage post-operatively occurs more often when insulin is given in the days immediately following surgery. It is felt that insulin should be withheld for about six weeks post-operatively but the patient should be treated by dietary measures during this time.

Many there are who are told to wait before consulting an oculist until all vision is gone, but these people needn't be deprived of sight even in the maturing stages of cataract. Often, one lens will become cataractous first, and some men feel that these patients should wait until the other eye fails to see. Why not operate on the non-seeing eye and give the patient the benefits and joys of good vision while the second cataract is maturing? These conclusions have come to the foreground because of newer technique in intracapsular cataract extraction, akinesia (or anesthesia of the sphincter palpebrae muscles so that patients cannot squeeze their eyes during or immediately after operation) and more detailed asepsis of the operative field.

We have in a rather abbreviated way gone through the span of life from infancy to old age and gleaned here and there some facts that do not stand out in bold type in textbooks, but which are at times comforting to know so that one can more conscientiously and deliberately give counsel to the needy and assistance to the afflicted.

307 N. Michigan Avenue.

JERSEY LIGHTNING AND THEN SOME

"Did you ever taste moonshine whisky?"

"Certainly not," replied Uncle Bill Bottletop. "Anybody who can't swallow fast enough to keep from tastin' it has no business tryin' to drink it."

—*Washington Star.*

A SCHOOLBOY'S EXPLANATION

Water is composed of two gins, Oxygin and Hydrogin. Oxygin is pure gin, Hydrogin is gin with water in it.

NEW MAINSPRING, PLEASE

"What happens to people who are so foolish as to allow themselves to become run down?" asks a doctor. They wind up in hospital.

—*Humorist (London).*

DERMATITIS REPENS TREATMENT WITH INTRADERMAL INJECTIONS OF STAPHYLOCOCCUS ANTIVIRUS BESREDKA*

S. J. Zakon, M. D.
CHICAGO

In 1888 Radcliffe-Crocker[1] described an eruption from his observation on three patients which he defined as "A spreading dermatitis, usually following injuries, and probably neuritic, commencing almost exclusively in the upper extremities." This condition he named dermatitis repens. His description of the eruption which is the classical description of dermatitis repens is as follows:

"In all the cases in which inquiry has been made, an injury, often a trivial one, has been the exciting cause. Vesicles or a bulla have appeared at the site of the injury and these have ruptured, and the elevated epidermis has been thrown off, leaving a bright red surface, oozing a clear or slightly turbid fluid. The border of the denuded area is bounded by a collar of the epidermis, which is raised up by subjacent fluid, clear or turbid, and is sodden and irregular. Sometimes extension takes place by the continued detachment of the epidermis by further exudation, or there may be fresh vesicles or small bullae just beyond the border, which break down and add a newly-denuded area to the original adjacent one. Although new adjacent foci may thus be formed, the disease does not generalize by the formation of new distinct foci. Cases may last for weeks, months, or even years."

In 1890, Hallopeau[2] reported a number of cases of peculiar inflammation of the skin, usually situated on the extremities, which present clinical characteristics resembling dermatitis repens. Hallopeau reported his cases as "Acrodermatite Suppurative Continue."

Since 1890 excellent studies of dermatitis repens were published by Stowers,[3] Sutton,[4] Barber and Eyre,[5] Fischl,[6] and others. It is now generally accepted that dermatitis repens Crocker and acrodermatitis continue Hallopeau are one and the same affection, differing only in degree of severity, the more severe generalized variety being termed acrodermatitis continue and the localized variety dermatitis repens.

The bacteriological investigations that have been carried out by numerous investigators—Hallopeau,[2] Sutton,[4] Hartzell,[7] Barber and Eyre,[5] tend to prove that dermatitis repens is due primarily to infection of the skin with a strain of Staphylococcus aureus of a particularly virulent type possessing an elective affinity for the extremities and for the nail beds especially. It is, however, possible that the virulence and resistance of this strain are acquired characters and are dependent on certain conditions present in the host which favor its growth.

The belief that the affection is of neuritic or trophoneuritic origin was definitely excluded by Sutton[4] who succeeded in transferring the condition to the chest of the patient.

The pathology consists of a parakeratotic thickened horny layer with abscesses in the upper layers of the rete Malpighii, just below the horny layer. There is edema and cell infiltration of the papillae and upper parts of the dermis; in the deeper parts of the dermis are perivascular groups of cells. The abscesses are composed of polymorphonuclear leucocytes which leave the enlarged vessels in the papillary and subpapillary layers and pass between the rete cells to collect in the upper layers beneath the stratum corneum. This subcorneal abscess, or "lake of pus" as the French described it, is the essential lesion of dermatitis repens. Resolution of this abscess takes place by desiccation and exfoliation.

The disease is extremely rebellious to treatment and the eruption usually lasts for years. Numerous cases have been published where the disease lasted from five to fifteen years. In the case of Stower[3] the eruption lasted forty-five years.

The complete recovery of a case of dermatitis repens of six years duration treated by intradermal injections of Antivirus Besredka is deemed worthy of publication.

Report of case.

Presented by Dr. Arthur W. Stillians at the meeting of the Chicago Dermatological Society, December 16, 1931.

A school boy, aged 9 years, stated that when he was about 4 years of age he developed an inflammation under his right thumb nail. He did not remember any trauma preceding the appearance of the inflammation. The inflammatory condition of the thumb persisted and continued to spread slowly. He had lost between thirty and fifty thumb nails. The nails of the fingers were also pitted, thin, and brittle. All forms of therapy were tried including roentgen rays; but without much effect.

On examination, the eruption involved the tip and inner side of the thumb, the whole right palm and the dorsum of the right hand as far as the fourth inter-

*From the Department of Dermatology and Syphilology Northwestern University Medical School.



Fig. 1. Shows the characteristic picture of Dermatitis Repens, spreading from the original site of infection on the right thumb. Note the collar of elevated epithelium.

digital space. (Fig. 1.) Each interdigital space was separately involved.

The primary lesion consisted of minute vesicles which when ruptured left pin point pits over a denuded reddened oozing surface giving the palm the appearance of a sponge with hollow little openings. The denuded surface was surrounded by a collar of elevated epidermis, with undermined borders.

Frequent examinations of scales from the lesions had not shown fungi. Cultures showed growths of staphylococcus aureus. No abnormality was found in the urine. The blood count showed hemoglobin 75 per cent.; red cells 4,920,000 and white cells 11,500 of which 56 per cent. were neutrophiles, 2 per cent. eosinophiles, 2 per cent. basophiles, and 40 per cent. lymphocytes. The blood Wassermann reaction was negative. The trichophyton reaction was negative.

The patient's general condition was good. There were no detectable foci of infection. He did not complain of any itching or pain except when the lesions dried. The right hand and wrist were markedly smaller than the left hand and wrist.

It was in the hope of producing an immunity of the skin to staphylococci in this chronic disease that treatments with intradermal injections of Staphylococcus Antivirus Besredka were given.

A stock staphylococcus antivirus was used. Treatments were given at first twice a week, later once a week. The dosage was gradually increased from 0.1 c.c. to 0.5 c.c. The sites for injection used were the flexor surface of the forearms. Each injection produced a definite local reaction in the form of an inflammatory infiltrated papule surrounded by an erythematous zone. The reaction usually reached the height in 48 hours and then gradually subsided. In toto from December 17, 1931, to May 31, 1932, 34 injections were given. Locally a ten per cent. boric acid petrolatum ointment was used. Since the condition cleared up the right hand and wrist have markedly increased in size. Since June the patient was observed at frequent intervals, but there has been no recurrence.

DISCUSSION

In recent years there have been developed in Europe two entirely new forms of therapy for bacterial infections; 1. Bacteriophage, 2. The antigen of Besredka which he called the antivirus.

Historically they are synchronous. Therapeutically they are used in much the same manner.

According to Besredka, the antivirus is a sterile solution, containing products of bacterial growth which are antagonistic to toxins formed by bacteria in the body and inhibitory to bacterial growth. Like bacteriophage culture it is a stimulus to leucocytosis and phagocytosis. This product is prepared by growing virulent pathogenic bacteria in special broth until the products of their metabolism are so concentrated that the growth of the bacteria is no longer possible. The culture is then filtered through a sterile Berkefeld filter to remove all bacteria. The presence of antivirus in the filtrate is demonstrated by its ability to prevent growth of the same kind of bacteria when such are inoculated into it.

Besredka[8] had for some time taught that

local or tissue immunity was important in some infections, and that this immunity did not depend on the presence of antibodies in the serum—the agglutinins, the precipitins, aggressins, opsonins, etc., which were generally accepted as being concerned in the production of immunity. The fact that staphylococcus is a normal inhabitant of the skin and a staphylococcal infection of the skin is nearly always to be found before the involvement of internal structures—these facts seem to suggest that it is the skin cells in these infections which are sensitive and that it is in and around these cells that immunity fails to develop. However, whatever the theoretical explanation of the action of intradermal injection of staphylococcus antivirus may be, in this case it is only reasonable to attribute the recovery to the use of the antivirus as no other treatment had hitherto any manifest beneficial effect.

Conclusion: A case of dermatitis repens of six years' duration is reported in which intradermal injections of staphylococcus antivirus brought about a complete recovery.

185 N. Wabash Ave.

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TRAVEL NOTE

"Does the giraffe get a sore throat if he gets wet feet?"

"Yes, but not until the next week."

—*Allt for Alla (Stockholm)*

RUNNING TRUE TO FORM

Professor Kranz: "What did you find out about the salivary glands?"

Stude: "I couldn't find out a thing, Professor; they're too darn secretive."

—*Purple Parrot.*

BIOPSY IN MAMMARY CANCER

James Ewing, M. D.
NEW YORK CITY

The extent and severity of the radical operation for mammary cancer calls for a positive diagnosis in every case. Since women are now coming earlier for diagnosis of mammary disease, and often before the characteristic clinical symptoms of established cancer have developed, the diagnosis of these conditions has become more difficult and biopsies are more frequently required.

The practice of removing apparently benign nodules from the breast in a doctors' office and waiting two or three days for a report from a distant pathologist often leads to serious situations, and, in the opinion of some surgeons, may imperil the patient's chances for a cure even by a radical operation. The mechanical trauma from such a biopsy may well dislodge cancer cells and cut across and loosen cancerous lymphatics, while the delay of some days gives opportunity for the dislodged cells to reach the distant lymph nodes. The hyperemia of the inflammatory process may also stimulate tumor growth and facilitate the local growth and even the dislodgement of more active tumor cells. There have been some observations which indicate that these undesirable events actually occur and it is reasonable to assume that they do occur. Therefore the conservative surgeon will not remove a tumor nodule from the breast except in a surgical operating room where he is prepared to have an immediate diagnosis made and the proper operation performed at the same time.

There is a difference of opinion regarding the best method of performing the operation for a biopsy of the breast. Some surgeons prefer to cut directly into the tumor, make the diagnosis on the gross appearance which is usually specific, or cut out a piece of the tumor for frozen section. If the tumor proves to be cancer, the wound is closed over a sponge soaked in 10% formalin. They then discard the instruments and gloves used in the exploration, prepare the skin anew, and proceed with the operation indicated. This is a very direct and expeditious method. It avoids much trauma inevitable in a local excision which requires cutting on all sides of the tumor nodule. In

the case of bulky tumors it may be the best method.

In the case of small tumors I think it is safer to remove the whole tumor, together with a wide area of normal breast tissue, using extreme care not to squeeze or roughly handle the cancerous mass. This procedure avoids cutting into cancerous tissue, and if it is done with extreme care not to squeeze the tumor, cancer cells should not be dislodged.

An experienced surgeon or pathologist should be able to recognize the great majority of malignant tumors of the breast by gross examination of the cut surface of the tumor. Unless he can do this it is obvious that the tissue chosen for microscopic section may not contain the malignant tumor. Therefore great importance attaches to the gross diagnosis, which should be relied upon wherever possible. The extent of the disease also can be told only by gross examination. The cicatricial character, resistance, opacity or translucency, and the chalky streaks of carcinoma are generally specific. Frozen section is therefore often unnecessary but should be made in all cases which are in any respect doubtful to the particular surgeon or pathologist concerned. This diagnosis should be made at the operation and the appropriate procedure carried out immediately.

There are some lesions in the breast in which it is difficult for any surgeon or pathologist to state positively whether the condition is malignant or benign. Hence the surgeon must not assume that by obtaining a microscopic diagnosis he has secured positive information. In such cases the clinical data, age of patient, extent and duration of the disease, condition of lymph nodes, and especially the gross characters of the lesion should be given much importance in the decision. Under these circumstances some surgeons would err on the side of caution and perform the radical operation. I believe it is unfair to the patient to perform a radical mastectomy unless the diagnosis of carcinoma is positive. There are many precancerous and suspicious lesions in the breast which are clinically benign, while a true carcinoma is nearly always obvious to a pathologist of adequate experience. When a substantial doubt exists about the nature of a microscopic section of a breast tumor, it is generally not cancer.

25 W. 40th St.

DO YOU KNOW THAT—

According to Doctors I. Pilot and D. J. Davis, of the University of Illinois College of Medicine, the control and reduction of rheumatic disease depends to a considerable extent upon the control of hemolytic streptococcus throat infection?

According to the United States Public Health Service, Tularemia may be transferred from animals to humans by mosquitoes, if the mosquito bites the next victim shortly after biting an infected animal or patient? This transfer would necessarily be rare, but possible.

According to recent research it is the electrified particles in the air, or in other words, ionized air, which has the "curative values?"

The ultra-violet rays tend to ionize air particles?

There are more ultra-violet rays in the afternoon sunshine than in the morning?

Malaria takes two million lives throughout the world each year?

Research at Harvard University has discovered that the anti-typhoid vaccines now being made are from weakened typhoid fever germs, due to long propagation? The question has arisen as to the efficacy of the vaccines compared to those used during the World War.

Filtrable viruses may be plastic and transparent forms of ordinary germs rather than extremely small germs, Dr. E. C. Rosenow, of the Mayo Foundation, suggests?

Genes, the ultimate units of heredity, were seen and photographed for the first time by Dr. Belling, Carnegie Institution, of Washington?

Pericardial friction murmurs may be made to appear, vanish and reappear by respiratory movements, postural changes, and shaking or rolling of the body.

Changes in the pulse rate noted in obstructive jaundice may be due to the action of bile salts in producing block of the endings of both the vagal and sympathetic nerves.

Deleterious action on the heart attributed to insulin (in aged diabetics), is probably not due to a direct toxic action on the myocardium, but is probably related to the supply of carbohydrate that is readily available to this organ.

Copper forms with proteins a series of quite stable proteinates. Though it may have its uses, the too general use of copper might do harm.

Without milk or cheese in the diet it is difficult to obtain the needed calcium through food alone.

Epinephrine has a powerful effect on the impulse-initiating mechanism of the ventricles, and consistently prevents cardiac standstill by the induction of an idioventricular rhythm.

Society Proceedings

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, Wednesday, April 12, 1933

Program Sponsored by Northwestern University Medical School

Fractures of the Lower End of the Radius..... ..... Fremon Chandler

Unilateral Fractures of the Tuberosity of the Tibia; Diagnosis, Differential Diagnosis and Treatment.. ..... William R. Cubbins

Necessity of Early Differentiation Between Operative and Non-Operative Methods of Treatment in Fractures.....Paul B. Magnuson

Compression Fracture of Spine.....Harry E. Mock

Regular Meeting, Wednesday, April 19, 1933

GENERAL PRACTITIONER'S NIGHT

Clinical Demonstration of Dermatological Cases by the Dermatological Departments of the Four Universities

Northwestern University Medical School

Tertiary Syphilis .....Arthur W. Stillians

Carcinoma of the Scalp.....Erwin P. Zeisler

Naevus Vasculosus.....Harry M. Hedge

University of Illinois College of Medicine

Eczema.....F. E. Senear

External Irritant Dermatitis.....L. F. Weber

Tuberculosis Cutis.....Marcus Caro

Rush Medical College

Favus in Three Members of an American Born Family .....Ruben Nomland

Actinomycosis.....Michael H. Ebert

Moniliasis, with Psoriasis and Diabetes ....James H. Mitchell

Loyola University School of Medicine

Pityriasis Rosea.....Vincent D. Bowler

Exfoliated Dermititis.....G. E. Ravitz

Dermititis Medicamentosa.....B. Parker Beeson

Regular Meeting, Wednesday, April 26, 1933

A NEW PHASE OF THE ENDOCRINES

A Presentation That Interests the General Practitioner, the Internist, the Surgeon, the Specialist, and the Physiologist

Indications for and End Results of Denervation of the Adrenal Glands.....George W. Crile, Cleveland Clinic Foundation, Cleveland, Ohio

Recent Investigations on Anterior Pituitary Hormones ....J. B. Collip, McGill University, Montreal, Quebec

Discussion.....
- A. C. Ivy.
- A. J. Carlson.
- Carl Hedblom.
- Carl Davis.
- Percival Bailey.
- James Hutton.
- Mark Goldstine.
- R. T. Woodyatt.

OGLE COUNTY

The Ogle County Medical Society held its Spring Meeting at the Collier Hotel Rochelle, Friday, April 7, 1933.

After a short business meeting a most instructive talk was enjoyed.

Dr. J. L. Bollman, Mayo Foundation, gave recent experimental data on "the functions of the normal liver."

This was followed by slides illustrating the work.

Dr. Bogue, Sec'y.

Marriages

Charles Berkowitz, Chicago, to Miss Mary Aberbom of Winnipeg, Manit., Canada, March 19.

Louis Z. Fishman, to Miss Julia Mittelman, both of Chicago, March 19.

Howard E. Spafford, Malta, Ill., to Miss Ila Baxter of DeKalb, March 4.

Personals

Dr. Hugh Cabot, Rochester, Minn., addressed the Peoria City Medical Society, April 4, on "Recent Advances in the Treatment of Infection of the Urinary Tract."

Dr. James H. Hutton, Chicago, addressed the Macon County Medical Society, March 28, on "Progress in Endocrinology in its Relation to General Medicine."

Dr. Drew W. Luten, St. Louis, spoke on "Digitalis Therapy, Old and New," before the Adams County Medical Society in Quincy, March 13.

Dr. Harold Swanberg, Quincy, addressed the Whiteside County Medical Society at Sterling, April 3, on "Radium Therapy in Treatment of Uterine Hemorrhage."

Dr. Samuel M. Feinberg, Chicago, discussed food allergy before the Vermilion County Medical Society at Danville, April 4.

The Chicago Pathological Society was addressed, April 10, by Dr. George Milles, among others, on "Generalized Lymph Gland Reaction in a Transitional Cell Carcinoma of the Lungs."

Dr. Edward H. Weld, Rockford, Ill., discussed "Calcified Echinococcus Cyst of the Spleen" before the Chicago Surgical Society, April 7, among others, and Dr. Charles B. Hug-

gins, "Experimental Observations on the Epithelium of the Gallbladder and the Genesis of Bone."

Dr. A. A. Hershfield presented a talk on "Leisure Time of the Adolescent" at the April 12 meeting of the Parker Junior High School Parent-Teacher Association.

Dr. Frederick B. Moorehead gave a paper on "Plastic Surgery" at the April 12 meeting of Will-Grundy County Medical Society.

Dr. Harry M. Hedge gave an address on "Some Common Diseases of the Skin," April 13, before the Jackson County Medical Society.

Dr. Arthur J. Cramp gave his talk on "Patent Medicines" at Silvis, Illinois, on April 21 under the auspices of the Silvis Woman's Club.

Dr. Robert S. Berghoff addressed Macon County Medical Society at Decatur, April 18, on "Heart Disease."

The next meeting of the Endocrine Club will be held on Tuesday, April 18, 1933, at 8:00 P. M., at 303 East Chicago Avenue (Room 541), Hugo Rony will present Clinical Cases on "Pituitary and Metabolism." B. O. Barnes will discuss the Experimental Side.

Dr. James H. Hutton presented a paper on "The Relation of Diabetes to Other Endocrine Disorders" at the Will-Grundy County Medical Society meeting April 19.

Dr. Arno B. Luckhardt gave a talk on "Our Glands of Internal Secretion and What They Do" at a meeting sponsored by the Morton Junior College, April 18.

Dr. Arno B. Luckhardt addressed the Clinton, Iowa, County Medical Society on April 6, on the subject, "Recent Advances in Endocrinology."

Dr. Frank Phifer addressed Will-Grundy County Medical Society, April 5, on the subject, "The Complications of Gonorrhea in the Male."

Dr. J. A. Ascher, a member of the Board of Censors, of the Stephenson County Medical Society, and also a past president, was elected Mayor of Freeport by over fifteen hundred majority April 4, and will take over the office May 1.

May 3, Dr. John W. H. Pollard spoke over WGN under the auspices of the Chicago Tuberculosis Institute, on the topic "Public Cooperation and Responsibility for Prevention of Disease."

Dr. Sidney A. Portis gave a talk before the Chicago Dietetic Association on April 19, subject, "The Dietary Considerations in the Pre- and Post-Operative Management of Gall Bladder Disease."

Dr. Cleveland J. White has been invited to conduct a Skin Clinic before the Lake County Medical Society on May 2, at Gary. He will also give a paper on "The Ringworm Situation —A Resume of 2008 Cases with Clinical Laboratory and Experimental Studies."

Dr. C. I. Reed will give his illustrated lecture on "William Beaumont, the Backwoods Physiologist," before the student assemblies of the West High School, East High School, Junior High School of Aurora on April 24.

Dr. Clara G. Gottschalk presented a health lecture at the April 24 meeting of the Junior Longfellow Club of Oak Park.

Dr. Cyril L. Hale addressed the Business and Professional Woman's Club of Evanston at a dinner meeting April 24.

Dr. Robert A. Arens gave a talk on "X-Ray and Radium" before the students of the Morton Junior College April 25.

Dr. Josephine E. Young gave a talk on "Mental Hygiene of Children" at the Longfellow Woman's Club of Oak Park on April 25.

Dr. John S. McDavid addressed the student assembly of the Wheaton High School, April 26.

Dr. F. J. Novak, Jr., was guest speaker before the Detroit Otological Society at Detroit on April 19.

Dr. Aaron Arkin addressed the Rotary Club of Evanston on "The Value of Health Examinations" April 27.

G. Henry Mundt addressed the student assembly of the Hinsdale Township High School on April 28 on the subject, "The Romance of Medicine."

Dr. Aaron Arkin addressed Will-Grundy County Medical Society April 26, subject "Organic Heart Diseases and Their Differential Diagnoses."

Dr. James G. Carr addressed Fulton County Medical Society on the subject of "Cardio-Vascular Diseases" April 27.

News Notes

—Speakers before a joint meeting of the Chicago Roentgen Society and the Chicago Urological Society, April 12, were Drs. Noble Sproat Heaney, Herman L. Kretschmer and Eugene Ockuly, who discussed "Studies of Changes in the Upper Urinary Tract During the Course of Normal Pregnancy."

—At a meeting of the Chicago Laryngological and Otological Society, April 3, Drs. Ira Frank and Harry L. Pollock, among others, spoke on "Influence of Sir Phelix Semon on the Development of Laryngology" and "Head and Neck Manifestations in Metabolic Disorders," respectively.

—S. 380 proposes to authorize any court before which a personal injury action is pending to require the plaintiff, at the defendant's expense, to submit to a physical examination by one or more physicians, selected by the court.

—"Psychogenic Factors in Heart Disease" will be the title of a lecture to be given in the Rothschild Auditorium, Michael Reese Hospital, May 2, by Dr. Felix Deutsch of the University of Vienna. The lecture is under the auspices of the cardiovascular department at Michael Reese Hospital and the Frederick K. Babson Fund. Established four years ago, the fund is principally for clinical and laboratory research in diseases of the heart and circulation. It is administered by Dr. Walter W. Hamburger.

—The Kane County Medical Society, Dundee, presented badges of honor to all living past presidents of the society at a meeting, February 15. Dr. George J. Schneider, Elgin, who served in 1903, is the oldest living past president. Others are Drs. Frederick C. Schurmeier, Elgin, who held office in 1912; William H. Bishop, Elgin, 1913; William H. Schwingel, Aurora, 1915; Adam E. Diller, Aurora, 1917, 1918 and 1919; Lawrence J. Hughes, Elgin, 1920; George W. Haan, Aurora, 1921; Ralph W. Carpenter, Geneva, 1925; Carl P. Struve, South Elgin, 1927; John W. Dreyer, Aurora, 1928, and Hugh H. West, Elgin, 1931. Dr. Frank E. Simpson, Chicago, addressed the meeting on "Radium Treatment of Cancer."

—Dr. Eugene L. Walsh, Cleveland, is the recipient of the Joseph A. Capps Prize for 1932, awarded by the Institute of Medicine of Chicago, for his "Studies on the Etiology of Gallstones." Dr. Walsh graduated from Northwestern University Medical School in 1931. The Joseph A. Capps Prize of $500 is awarded annually for meritorious medical research by a graduate of a medical school in Chicago completed within two years after graduation. At a meeting of the Institute of Medicine of Chicago, April 28, Dr. Walsh will deliver the prize-winning paper, and Dr. Richard H. Jaffe will speak on "Histogenesis of the Valvular Changes in Malignant Endocarditis."

—S. 431 proposes to accord physicians, nurses and hospitals treating persons injured through the fault of other persons liens on all rights of action, claims, judgments, compromises or settlements accruing to the injured persons by reason of their injuries. S. 457 and S. 458 propose to create a board of examiners for "the medical practitioners who practice osteopathy" and to regulate the practice of osteopathy. The board is to be authorized to issue two kinds of licenses: (1) licenses to practice osteopathy in all its branches (according to the teaching of the osteopathic school of practice) and (2) licenses to practice osteopathy in all of its branches except major surgery. Holders of both kinds of licenses are to be permitted to make and sign birth and death certificates and to practice in hospitals supported in whole or in part by public taxation. H. 646, to amend the law relating to vital statistics, proposes that a certificate of birth contain, in addition to the data now required by law, a statement of the physical defects of the child, if any.

—Circuit Judge Thomas Taylor, Jr., rendered a decision, March 24, refusing to gradnates of the Illinois College of Physicians and Surgeons the privilege of taking examination to practice medicine in Illinois, according to the Chicago *Tribune*. The "college" is at 20 North Ashland Avenue, and its three incorporators doubled as officers, directors and students in their own class room. The action was a mandamus suit brought by a graduate of the school to compel the state department of registration and education to give him an examination for a certificate to practice medicine. In the building in which the college is located are so-called medical organizations which ethical physicians refuse to recognize, it was stated. The three incorporators of the school, Omer C. Bader,

Victor A. Piontkowski and Ewell B. Simpson, were said to be graduates of one of these organizations, called the College of Drugless Practitioners. Also in the building are the National College of Chiropractic and the Chicago General Health Service.

—A centralized collection of records on malignant tumors will be available through the establishment of a tumor registry by the Peoria City Medical Society. Through the registry, all types of treatment will be followed in an effort to determine their value for future use. How tumors occur and how they are influenced by existing methods of treatment will be considered. Membership will be extended to any physician who registers a case. The activities of the registry will be guided by a board of nine members according to Peoria *Medical News*, whose personnel will not be changed for five years, excluding changes made necessary by resignations, to preserve continuity. For the present, all records of complete histories will be kept in the laboratory of the St. Francis Hospital. A record of a patient's past treatment will be available to any physician requesting it. Each physician will follow up his own cases; for this purpose the registry will furnish him every six months a list of the cases he has registered. These records will be available for study to any member of the registry or of the medical society. Publication of papers on this material must be approved by the board, which is to meet often enough to keep in contact with the collection of material and will make an annual report to the medical society. The following physicians compose the first board: Fred H. Decker, Perry B. Goodwin, Harry B. Magee, Milton G. Bohrod, Hugh E. Cooper, Bransford L. Adelsberger, Harry A. Durkin, Clarence W. Magaret and Baxter Brown.

—The Michael Reese Internes' Alumni and Hospital Staff Association will hold its annual reunion on May 18. The hospital program will consist of surgical clinics, ward walks, a pathology conference, laboratory and tumor clinic demonstrations and medical motion pictures. The evening banquet is limited to the alumni.

Deaths

Emanuel Oliver Benson, Chicago; Rush Medical College, Chicago, 1900; formerly assistant professor of pediatrics, University of Illinois College of Medicine; aged 62; died suddenly, March 22, of chronic myocarditis and acute dilatation of the heart.

George Peck Brady, Chicago; Chicago Homeopathic Medical College, 1890, aged 72; died, February 9, in the Chicago Home for Incurables, of cerebral hemorrhage.

Elmer J. Burch, Duquoin, Ill; College of Physicians and Surgeons, Keokuk, 1886; a member of Illinois State Medical Society; aged 69, died, April 2, of appendicitis.

Frank Amos Chapman, Chicago; Marion-Sims College of Medicine, St. Louis, 1897; a Fellow A.M.A.; Rush Medical College, Chicago, 1914; assistant clinical professor of medicine, Rush Medical College; served during the World War; aged 56; on the staff of the Washington Boulevard Hospital, where he died, March 12, of uremia and nephritis.

William Paul Coons, Chicago; National Medical University, Chicago, 1901; aged 60; was found dead, February 21, of cyanide poisoning, self-administered.

W. Worley Damron, Carbondale, Ill.; St. Louis College of Physicians and Surgeons, 1904; aged 53; was killed, Dec. 23, 1932, when struck by a train.

George F. Dinsmore, Jacksonville, Ill.; Kentucky School of Medicine, Louisville, 1894; aged 69, died April 20, of heart disease.

George Edens, Danville, Ill.; Hahnemann Medical College, Chicago, 1879; aged 83; died, April 17.

Bernard F. Garnitz, Chicago; Loyola University School of Medicine, Chicago, 1921; member of the Illinois State Medical Society; aged 41; on the staff of the Evangelical Hospital, where he died, March 11, as the result of gunshot wounds inflicted by bandits, when he was lured by a false emergency call.

Jay Wesley Hamilton, Jacksonville, Ill.; Missouri Medical College, St. Louis, 1880; on the staff of the Illinois State Hospital; aged 75; died, February 20, of lobar pneumonia.

Cornelius Prentiss Harrigan, Chicago; Bellevue Hospital Medical College, New York, 1885; a Fellow A.M.A.; aged 69; died, March 18, of myocarditis.

Frederick Steele Hartmann, Chicago, Rush Medical College, 1885; a Fellow A.M.A.; gynecologist at West Side hospital and surgeon for several railroads; formerly surgeon at Cook County and St. Anthony de Padua hospitals; died, March 17, from coronary thrombosis and cerebral hemorrhage.

Thomas Leiper Kane, Chicago; University of Chicago, 1931; of the department of pathology in Cook County Hospital; aged 29; died, April 13, of scarlet fever and meningitis, said to have been contracted while doing post-mortems.

Frederic W. Kuechler, Newton, Ill.; Medical College of Indiana, Indianapolis, 1893; a Fellow A.M.A.; formerly county coroner, member of the state legislature and bank president; aged 56; died, February 25, of uremia.

John Pollard La Barre, Ottawa, Ill.; University of Maryland School of Medicine, Baltimore, 1901; veteran of the Spanish-American War; aged 55; died, March 8, in the Jackson Memorial Hospital, Miami, of cerebral hemorrage.

George Lotz, Chicago; College of Physicians and Surgeons, Baltimore, 1892; aged 70; died, March 14, of coronary embolism and arteriosclerosis.

Ephraim Lutz Shumaker, Louisville, Ill.; Miami Medical College, Cincinnati, 1881; aged 74; died, March 1, of cerebral hemorrhage.

Louis Frederick May, Chicago; College of Physicians and Surgeons, Chicago, 1895; aged 63; died, March 16, of heart disease.

Pearson McPherson, Chicago; Rush Medical College, 1886; a member of Illinois State Medical Society; aged 69; died, April 6, of chronic myocarditis.

Ralph Sherman Michel, Chicago; University of Pennsylvania School of Medicine, Philadelphia, 1876; a Fellow A.M.A.; aged 81; on the staff of the University Hospital, where he died, March 15, of uremia.

Zorah Elon Patrick, Winnetka, Ill.; Rush Medical College, Chicago, 1872; Bellevue Hospital Medical College, New York, 1877; aged 82; died, March 6, at the North Shore Health Resort, of myocarditis and bronchopneumonia.

Harry O. Philp, Benton, Ill.; Missouri Medical College, St. Louis, 1893; member of the Illinois State Medical Society; aged 63; died, March 22, of lobar pneumonia.

Frederick Albert Raue, Chicago, Chicago College of Medicine and Surgery, 1913; member of the Illinois State Medical Society; aged 46; died, March 13, in the South Shore Hospital, of septicemia.

Barnett A. Rynerson, West Union, Ill.; University of Louisville (Ky.) School of Medicine, 1891; aged 81; died, March 6, of chronic myocarditis.

Samuel N. Schneider, Evanston, Ill.; Chicago Homeopathic Medical College, 1880; member of the Illinois State Medical Society; aged 75; died, March 16, of myocarditis.

Charles Edmund Scullin, Peoria, Ill.; Rush Medical College, Chicago, 1903; a Fellow A.M.A.; aged 54; died suddenly, March 23, of angina pectoris.

Richard M. Singer, Chicago; Chicago College of Medicine and Surgery, 1916; a member of Illinois State Medical Society; aged 42; died, April 11, of cerebral hemorrhage.

Frank Peter Stedem, Champaign, Ill.; Eclectic Medical College, Cincinnati, 1899; medical director of Pacific States Life Insurance Company; died, suddenly, April 15.

Benjamin Moore Stephenson, Peoria, Ill.; Medical College of Ohio, Cincinnati, 1885; aged 75; died, March 12, in the John C. Proctor Hospital, of cerebral hemorrhage and arteriosclerosis.

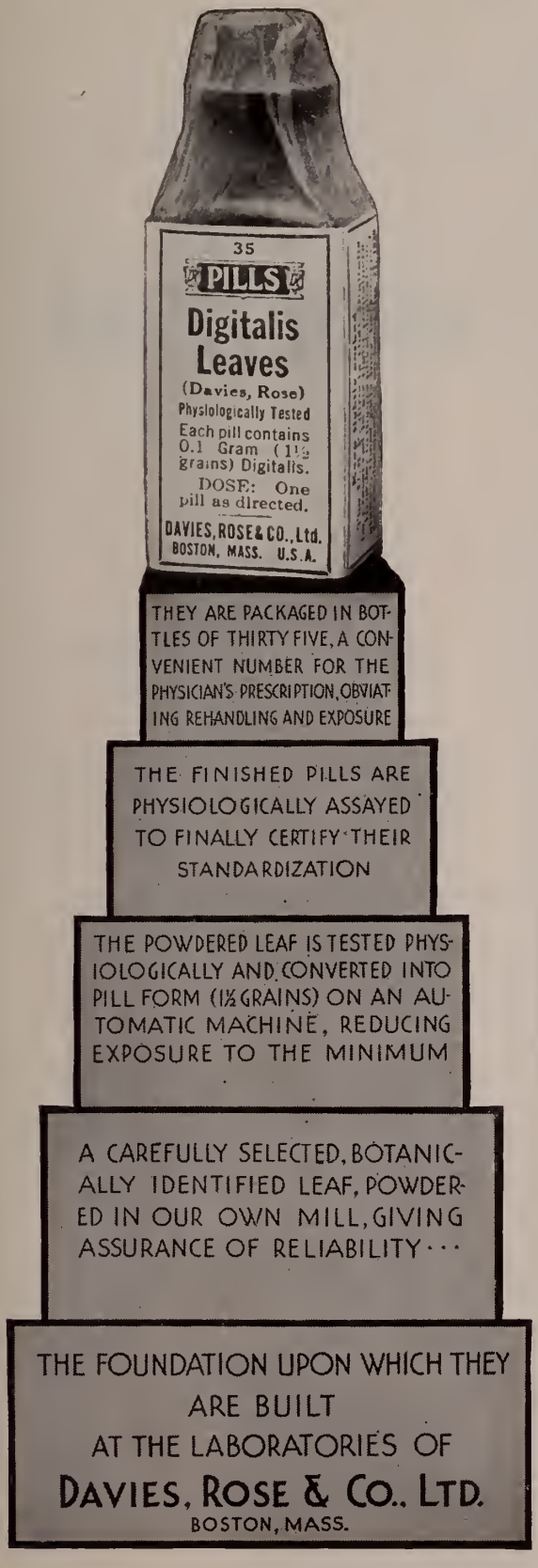
Frank Jackson Stewart, Chicago; Harvey Medical College, Chicago, 1903; a Fellow A.M.A.; Chicago College of Medicine and Surgery, 1916; aged 57; died suddenly, March 31, in St. Lukes Hospital, of heart disease.

Charles Ogden Truscott, Cisne, Ill.; Miami Medical College, Cincinnati, 1886; member of the Illinois State Medical Society; formerly village president and postmaster; aged 71; died, February 27, of arteriosclerosis.

William Herman Wiesjohn, Chicago; Chicago Medical School, 1927; member of the Illinois State Medical Society; aged 47; died, March 31, of acute myocarditis.

Charles Woodward, Chicago; Eclectic Medical Institute, Cincinnati; 1879; member of the Illinois State Medical Society; Civil War veteran; aged 87; died, March 14, of uremia.

George Frederick Yates, Chicago; Rush Medical College, Chicago, 1888; aged 69; died, March 23, in the Wesley Memorial Hospital, of injuries received in an automobile accident.



Book Reviews

CLINICAL ASPECTS OF THE ELECTROCARDIOGRAM. By HAROLD E. B. PARDEE, M.D. With seventy-four illustrations, third edition. Revised. New York. 1933. Paul B. Hoeber, Inc. Price $5.50.

New facts discovered since the writing of the previous edition have prompted the author to re-write most of the chapters very extensively. New material has been presented on the subjects of the variations of the normal electrocardiogram especially in regard to the study of the S-T interval and the duration of the ventricular complex. Much new material has been added to the work in chapters dealing with other phases of the subject.

LIGHT THERAPY. By FRANK HAMMOND KRUSEN, M.D. With a foreword by John A. Kolmer, M.D. Thirty-three illustrations. New York. Paul B. Hoeber, Inc. 1933. Price $3.50.

This work will be found to be an important companion volume to other text books dealing with the treatment of disease, it offers a far more exhaustive presentation of the present status of various forms of light therapy, the technique, applications and limitations than is to be found in most text books.

OPERATIVE SURGERY: By WARREN STONE BICKHAM, M.D. AND PHAR. M. (Tulane), M.D. (Columbia), F.A.C.S., Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York; Former Instructor in Operative Surgery, College of Physicians and Surgeons (Columbia), in the New York Post-graduate Medical School and Hospital and in the New York Polyclinic Medical School and Hospital, Fellow of the New York Academy of Medicine, and Calvin Mason Smyth, Jr., B.S., M.D., F.A.C.S., Assistant Professor of Surgery, Graduate School of Medicine, University of Pennsylvania; Surgeon-in-Chief Methodist Episcopal Hospital; Visiting Surgeon, Abington Memorial Hospital. Volume VII, including General Index to complete work, Volumes I-VII. 849 pages with 765 illustrations. Philadelphia and London: W. B. Saunders Company, 1933. Cloth, $10.00.

In this volume the author has brought up-to-date the previous six volumes by the addition to each section of those operative procedures which have become established as a part of the armamentarium of the well equipped surgeon. Not every new operation has been described but the more important ones have been included. A few older operations omitted from previous volumes have been included. There have been one or two duplications for the purpose of completeness.

INTRACRANIAL TUMORS. By LOYAL DAVIS, M.D. Edited by James T. Case, M.D. Volume fourteen. New York. Paul B. Hoeber, Inc. Price $10.00.

In this new work the author points out and illustrates by roentgenograms and clinical data the importance of coordinated effort on the part of the surgeon and roentgenologist in accurate diagnosis of the various types of intracranial tumors. The dangers and pitfalls of purely mechanical diagnosis are emphasized.

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Book Reviews

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PRACTICAL HEMATOLOGICAL DIAGNOSIS: By O. H. PERRY PEPPER, M.D., Professor of Clinical Medicine, University of Pennsylvania; Assistant Chief of the Medical Clinic, Hospital of the University of Pennsylvania; and David L. Farley, M.D., Physician to the Pennsylvania Hospital, Philadelphia; and to the Cooper Hospital, Camden, N. J.; Associate in Medicine of the University of Pennsylvania. 562 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1933. Cloth, $6.00 net.

This book presents concisely the practical aspect of clinical hematology in simple terms and with an arbitrary selection of methods.

Special attention has been given to the blood pictures of the many disorders in which the hematological changes are merely symptomatic.

TEN YEARS OF OBSTETRICS & GYNECOLOGY IN PRIVATE PRACTICE. By JOHN L. ROTHROCK, M.D. Illustrated. New York. Paul B. Hoeber, Inc. New York. 1933. Price $3.00.

This work is compiled from a series of 1750 obstetrical cases, all of which were personally cared for in a period of ten years. It is strictly limited to individual work. Report deals exclusively with clinical aspects; no effort has been made to review the literature of the subject matter included in the report.

PERIPHERAL NERVE INJURIES. By LEWIS J. POLLOCK, M.D. AND LOYAL DAVIS, M.D. With 312 illustrations. New York. Paul B. Hoeber, Inc., 1933. Price $10.00.

This book represents the results of the authors analyses personal experience with a relatively large number of injuries to the peripheral nerves. The views presented in this work are largely those of the authors, although sufficient references have been made to the works of others so that the descriptions are comprehensive and an opportunity is afforded for comparison of opinions.

THE ABILITY TO PAY FOR MEDICAL CARE. By LOUIS S. REED, Ph.D., University of Chicago Press. Price $2.00.

This work is number 25 of the publications of the Committee on the Costs of Medical Care.

THE INCIDENCE OF ILLNESS AND THE RECEIPT AND COST OF MEDICAL CARE AMONG REPRESENTATIVE FAMILIES. By I. S. FALK, Ph.D. MARGARET C. KLEM, NATHAN SINAI. University of Chicago Press. Price $3.00.

This book is number 26 of the Publication of the Committee on the Costs of Medical Care.

THE COSTS OF MEDICAL CARE. By I. S. FALK, Ph.D. RUFUS ROREM, Ph.D. AND MARTHA D. RING. University of Chicago Press. Price $4.00.

This book is number 27 of the publication of the Committee on the Costs of Medical Care.

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Book Notes

Clinical Diagnosis Physical and Differential. By Neuton S. Stern, M.D. New York. The Macmillan Company. 1933. Price $3.50.

This work represents the author's own experience. It is intended to fill the needs of students as they are learning to make a diagnosis. Part one treats the body as a whole. Part Two covers the findings associated with Tuberculosis and Heart Disease; Part Three gives a discussion of the necessary steps in making a diagnosis. Part Four gives a discussion of symptoms and signs, the mechanism by which they are caused, and the diseases employing these mechanisms.

The Medical Secretary. By Minnie Genevieve Morse. New York. The Macmillan Company. 1933. Price $1.50.

Criteria for the Classification and Diagnosis of Heart Disease. Third Edition. New York. The New York Tuberculosis and Health Association. 1932. Price $.....

This is the third edition of the book. The Nomenclature has been greatly expanded so as to include all of the diagnoses occurring in connection with cardiac disease and to make it possible to correlate this system of nomenclature with the "Standard Classified Nomenclature of Disease" edited by Dr. H. B. Logie and published by the Commonwealth Fund. Because of this expansion of the Nomenclature, the Criteria have also been expanded. The former editions of this book did pioneer work in spreading the idea of the diagnosis of cardiac disease according to etiological, pathological and functional disturbances, as well as suggesting a functional classification for cardiac patients. These features have been retained in this edition.

Medical Clinics of North America. (Issued serially one number every other month.) Volume 16, Number 5. (Baltimore Number—March, 1933.) Octavo of 257 pages with 16 illustrations. Per clinic year July, 1932 to May, 1933. Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

The contributors to this number are Drs. Austrian, Barker, Beck, Bridgeman, Brown, Byrnes, Cole, Cross, Freeman, Friedenwald, Futcher, Gaither, Harrop, Hohman, Longcope, Pincoffs, Shaw, Sprunt.

International Clinics. Vol. I—Forty-Third Series 1933. Philadelphia, Montreal, London, J. B. Lippincott Company. 1933. Cloth, $3.00.

Volume I of the Forty-third Series of INTERNATIONAL CLINICS appears under a new editor and with a new list of collaborators, all prominent medical names of this country, Canada and abroad. The object of INTERNATIONAL CLINICS is to bring to the practitioner in the form of clinics, clinical lectures and reviews the latest information about current medical thought and practice. The present volume accomplishes this object in a satisfactory way. The first article, by Bloomfield of Stanford University discusses the indications for the use of special tests by the practitioner. Those physicians who are perplexed by the innumerable special tests which are so commonly performed and so widely advocated will be encouraged to learn that a prominent teacher of medicine considers them often superfluous and sometimes misleading. It is refreshing to be boldly told that medicine may be practiced without them except when particular and unusual conditions require for their proper understanding the special information these tests may yield. To use them indiscriminately and routinely is unwarranted and even ridiculous.

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"I am sure you will appreciate the tenor of this reply and our reason for requesting you to refer the matter to your physician. Our business has been developed entirely along ethical lines in accordance with best medical practice, as experience has shown that both the doctor and the patient are best benefitted by this procedure."

Not only is this answer a tactful one but it drives home to the layman a lesson of which he is very much in need. When the doctor stresses the fact that "each individual patient exhibits different symptoms which are understood only by the attending physician and the treatment of the case must naturally be left to this physician," he may be accused of harboring selfish motives. But when a drug manufacturer assumes this attitude, the layman is quite likely to sit up and take notice.

The particular pharmaceutical house in question has set an example in ethical practice that many could follow with benefit to themselves and the public they purport to serve. What a distinct step forward if druggists generally would actually interest themselves in the public's health by thwarting instead of aiding the general inclination of self-medication.

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1. Tuberculosis still kills more persons between the ages of 15 and 45 than any other *disease.*

2. Tuberculosis is the *greatest cause of death* between the ages of 20 and 40. This includes accidents.

3. One out of every five persons who die between the ages of 15 and 45 dies of tuberculosis.

4. One out of every three young women who die between the ages of 15 and 30 dies of tuberculosis.

5. There are 85,000 deaths from tuberculosis each year in the United States.

6. There are 500,000 others ill of tuberculosis at any given time. Each one of these may pass the disease on to healthy persons, and many would if it were not for the work of our associations.

7. Tuberculosis kills more children under 21 than *any other communicable disease.*

8. It is estimated that 2,000,000 children have been infected with the germs of tuberculosis—and it is from these children that most of the active cases will come in later years.

9. In cities, practically all adults tested show a positive reaction to tuberculosis. This indicates that the menace of tuberculosis is still as great as ever. It is merely lying in wait for an opportune time to break forth.

—National Tuberculosis Association.

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1. Keep full records of every case, covering both hospital and office care and including telephone consultation.

2. Do not spare x-rays.

3. Avoid, as far as possible, carrying on your practice by telephone. Telephone diagnosis and treatment can lead to serious mistakes and misunderstanding.

4. Fill out death certificates accurately and completely. These may be used as evidence with serious consequence.

5. Do not have an autopsy performed without a written permission, signed by the nearest relative.

6. Avoid careless and ill-founded opinions, particularly in regard to the results obtained by other physicians.

7. Defer pushing collections on a dissatisfied patient who may bring suit rather than pay his bill. He has only two years from the date of the last treatment in which to make a claim, while your bill is not outlawed for six years.

8. Make friends with your patients by your honesty and fairness towards them, for the every-day patients make up your jury and their friendliness to you means their friendliness to the profession.

9. Carry adequate protective insurance.—*The Bulletin of the Hennepin County Medical Society.*

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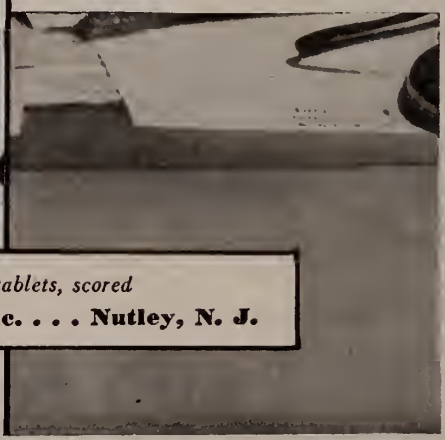


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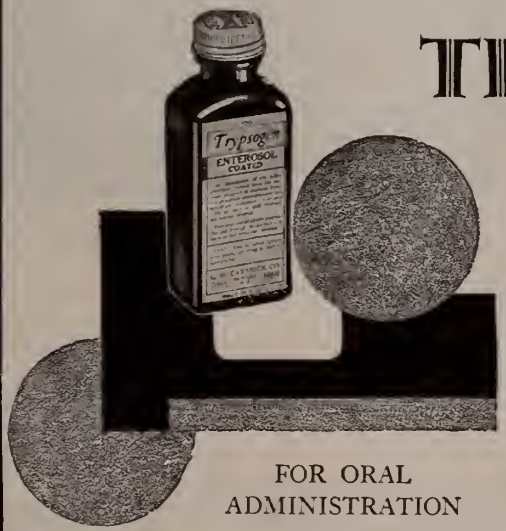
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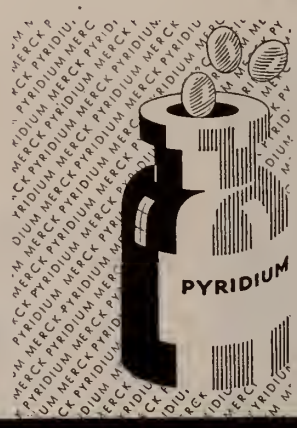
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Gastric Anacidity Its Relation to Disease. By Arthur L. Bloomfield and W. Scott Polland, M.D. New York. The Macmillan Company. 1933 Price $2.50.

Obstetrics and Gynecology: By 80 Leading Specialists. Edited by Arthur Hale Curtis, M.D., Professor and Head of the Department of Obstetrics and Gynecology, Northwestern University Medical School; Chief of the Gynecologic Service, Passavant Memorial Hospital, Chicago, Ill. Complete in 3 Volumes and Separate Desk Index. 3500 pages with 1664 Illustrations, many in colors. Philadelphia and London: W. B. Saunders Company, 1933. Per set, Cloth $35.00 net.

These volumes are presented by the heads of departments and other prominent teachers in the leading medical schools of America. The authors were chosen from a complete list of specialists in obstetrics and gynecology and eminent teachers in allied fields. The outstanding obstetricians and gynecologists responsible for this work has produced a comprehensive and authoritative group of books on obstetrics and diseases of the women. The uniform excellence of the text bespeaks the untiring efforts of the contributors to give the best that can be produced in this field.

Surgical Pathology: By William Boyd, M.D., M.R.C.P.Ed., F.R.C.P. Lond., Dipl. Psych., F.R.S.C., Professor of Pathology, University of Manitoba; Pathologist to the Winnipeg General Hospital, Winnipeg, Canada. Third Edition, Thoroughly Revised. 866 pages with 477 illustrations and 13 colored plates. Philadelphia and London: W. B. Saunders Company, 1933. Cloth $10.00 net.

The object of this book is to present those aspects of pathology which will prove useful to the surgeon. Modern surgery is based on pathology as much as on anatomy. But the ordinary text book of pathology contains a large amount of material of little interest to the surgeon, and it often lacks a detailed discussion of the very subjects regarding which he is seeking information. In the present volume an attempt is made to meet this want.

Surgical Clinics of North America. (Issued serially one number every other month.) Volume 12, Number 2. (New York Number—April 1933) 274 pages with 56 illustrations. Per Clinic Year (February 1933 to December 1933) Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

The contributors to this number are Drs. Adair — Arenson — Barringer — Beer — Binkley — Coakley — Coley — Colp — Copeland — Craver — Dean, Jr., — Dudley — Duffy — Ferguson — Frank — Gilbert — Goldbloom — Hanford — Held — Higginbothan — Hocker — Hoffman — Hyman — Kelly — Lee — Lilienthal — Lucas — Mac Comb — Malloy — Martin — McNattin — Neuhof — Pack — Smith — Stetson — Stewart — Taylor — Watson — Wirth.

(Continued on page 23)

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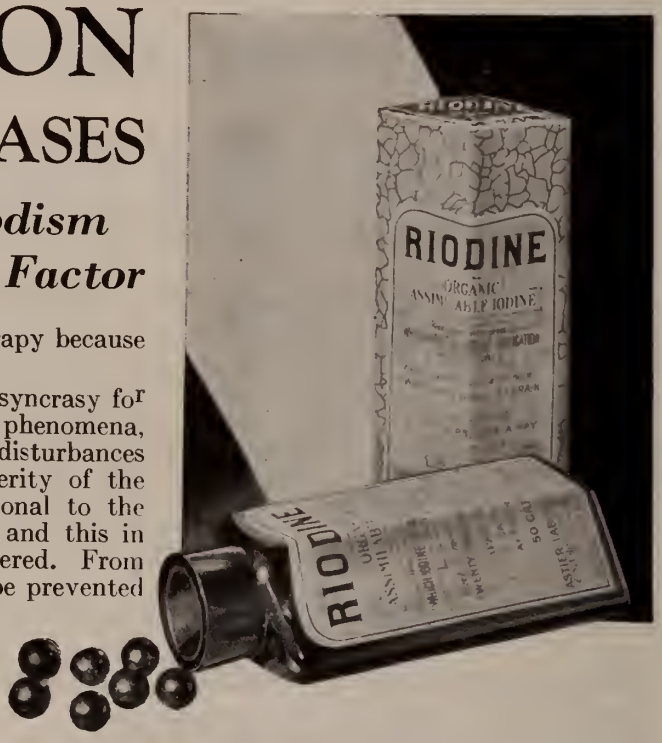
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Editorials

THE WAY OUT WILL NOT BE EASY. BUT THE WAY OUT MUST BE FOUND. IT CAN BE FOUND.

The saying that "nothing is sure but death and taxes" is merely a running mate for the inescapable fact that nothing is surer than high taxes and rebellion.

History proves this time and time again. Unless the bureaucrats take a "high-wide-and-handsome" reef in their sails the signs are that history may prove it again and that only too soon. Consider the state of a country where in a period of fifteen years population increases 15%; the number of federal employes, 37% and the cost of central government—THREE HUNDRED PER CENT.

So, contemplation of the proposed plan of taxation settling like a malign shadow on the backs of the citizens of the United States stirs up the old demons of rebellion, guarded by wrath and righteousness from where they have lain since the days of the Boston Tea Party. "Taxation without representation" is as unjust to-day as it was in the days when Washington, Henry, Hamilton, Jefferson and three score other God-advised patriots rose in protest for liberty and against license that drained the substance of decent men and women.

Now all this super taxation, almost literally a tax upon a tax is the result of what two prime evils?

1. Of a labyrinth of laws that are not only useless, confounding and for the most part unknown, whose partial enforcement calls for the support of far too large a proportion of absolutely untaxed citizen-employes of the United States and

2. The installation and ever increasing substance and personnel of a more complete centralization of government and absolutely bureaucratic control than ever sent the French revolution to churning or Red Russia on a riot.

Nor is this mere hysterical maundering of a

prejudiced propagandist. Facts, figures and finance tell the story.

Though the up-keep of prohibition's partial enforcement is one of the heaviest of burdens upon the taxpayer, who sees his country's instruments of defense cut to the bone that bureaucrats may keep their jobs and their taxless yet taxpayer paid salaries, the greatest menace to-day is the burden of laws upon laws and laws upon laws. Where they begin and where they end nobody knows. What the taxpayer is about to discover this year as never before is that by the time he has finished paying taxes for supporting the people who are paid to try to enforce laws that nobody wants he can begin to pay for the support of the people who are maintained at the taxpayers' expense because of infringements of some of the thousands of laws. As a nation we have gone infantile on the subject of kindness to criminals. "The policeman's lot is not a happy one," perhaps, but goodness knows the tax rates are enough and the institutions of restraint and punishment comfortable enough to make the average criminal's life far easier and far happier than that of the average tax-paying citizen.

A decade ago the late Senator Albert J. Beveridge remarked that we were working under more laws and far greater taxation than had afforded justifiable excuse for the French revolution. And we have been going steadily on, since then, by leaps and bounds for more laws and more taxation and more taxation and more laws.

The tremendous loss of revenue from the liquor industry added to the tremendous taxation for the inept, aye almost impossible, enforcement of a law that only a portion of the nation wants and that even a smaller proportion respects is one of the most massive loads upon the taxpayers' shoulders. It is not the purpose of this article to be anti-prohibition propaganda since the prohibition amendment is but one of hundreds of hampering laws, albeit perhaps our most expensive piece of excess baggage. Suffice it to say in passing and in reminder that this law was a war measure, or rather put up to the country as a war measure just as was the drafting of an army and a navy, both of which lawmakers are now trying to put out of existence. Even so, when the country got back into mufti was it rational that the statute books and the economic conditions of the land should still be kept in the khaki and the blue?

This achievement came because its life sprung democracy and the most humane form of national government devised by civilized man. This achievement came because its life sprung not from a mess of laws but from a group of principles rooted in the brief statement that the "least government is the best government" and that bureaucratic control and overcentralization of government allied with high taxation produce the "abomination of desolation." Thanks to political jobbery coupled with the credulity and national indifference to questions economic the monstrous abomination would seem to be about to be spawned in the very laps of a suddenly terrified people.

The way out will not be easy. Nothing worth while ever is. But the way out must be found, it can be found, and it may be found only by a direct determination of the people to take such a firm hand on the strings by which the politicians manipulate the legislative and executive machinery of this country that it will be the politicians and not the people, the tax-eaters and not the taxpayers who are exploited.

Chicago as a city is a bankrupt municipality and a shame to the nation with its financial ravishment and plundering. Yet, "Let him who is without stain cast the first stone." Corruption in government did not start first in the city by the lakeside. Decent citizens have grown far too accustomed to considering a little governmental corruption like a civic cold in the head. Yet a common cold is a dangerous affair and calls for complete and immediate eradication for the benefit of the community.

Something must be done to purge the country of its contamination. Nor is this a case where "the hair of the dog cures its bite" by landing more officers, more laws, more control upon a suffering land. Unless, and here is the exception that proves the rule, with one fell swoop we might return to that immortal document, the original Constitution of the United States with all amendments, save that relating to slavery and equal franchise wiped clean off the slate.

It would be good to feel that much legislative freedom again. It would be great to be again a citizen of a free republic. It would be inspiring to be less "well-managed."

Here are facts to set you thinking. Here are facts to make you telegraph the men you have elected to state and to national legislative bodies. Their authenticity is that of no less an organization than the *Chicago Daily Tribune.*

Under date of Dec. 28, 1931, writes Arthur Sears Henning for publication in the *Chicago Daily Tribune* of Dec. 29, 1931, that the "Cost of United States Government Soars Three Hundred Per Cent. in Fifteen Years." Now in that time neither the savings accounts, nor the wage earning capacities of the bulk of the citizens of the United States have approached anything like even one tenth of that amount. In fact the discrepancy of the ratio between the taxes paid by the wage earner and his earnings reduces the average citizen to the state of peonage rather than maintains him in self-respecting citizenship.

The answer to all this is not to destroy government but to maintain government but reduce its cost of maintenance by destruction of its leeches and barnacles.

Listen to Mr. Henning:

Further says Mr. Henning under date of Dec. 29, 1931:

[Chicago Tribune Press Service.]

Washington, D. C., Dec. 28.—[Special.]—The federal bureaucracy is a voracious tax eater. In the last 15 years, while the population increased 16 per cent, the number of federal employes increased 37 per cent and the expenditures on the civil functions of the central government rose nearly 300 per cent.

Largely because of the expense of such effort as is being made to enforce prohibition, the cost of federal law enforcement is now ten times what it was 15 years ago. The cost of the legislative, judicial, executive and other general functions of the government has trebled, while the cost of paternalistic, subventional and regulative activities has quadrupled.

PRESIDENT'S OFFICE COSTLY

The White House and its grounds have an appraised value of 18 millions. The rental value is therefore a trifle more than one million a year. If to this rental there be added the White House and executive office expenses, including the military and naval aides, secret service men and police, it appears that the annual cost of the presidential office to the taxpayers is $1,650,679.

COST OF CONGRESS.

For the expenses of the senate the appropriation this year is $3,249,292. The salary item for 96 senators is $960,000, while their mileage at ten cents a mile to and from Washington requires $51,000. Salaries of officers and employes aggregate $1,694,132, and the contingent expenses, including that of the multitudinous senate investigations, comes to $544,160.

The house of representatives is costing $8,183,612 this year. The salaries of representatives, territorial delegates and commissioners total $4,405,000, their mileage $175,000. The salaries of house officers and employes aggregate $1,035,962 in addition to which $2,200,000 is appropriated for the clerk hire allowance of members. The contingent expenses come to $362,650. The capitol police and other miscellaneous expenses are down for $188,050.

The architect of the capitol and 14 assistants are paid $48,580, the upkeep of the capitol costs $352,555, and improvement of the grounds $256,726. The senate office building costs $216,963 to maintain while $3,079,350 is being expended this year on its completion. The house office building costs $198,256 to maintain. Upon construction of an additional house office building $3,400,000 is being expended this year. The capitol power plant requires an outlay of $359,450.

OTHER COSTLY APPURTENANCES.

Upon the maintenance and extension of the library of congress there is being spent this year about $3,725,000. The botanic garden, which is an appurtenance of congress, costs $173,882, while $576,398 is being expended this year on construction of new conservatories. Free flowers and potted plants for their social affairs are botanic garden perquisites of senators and congressmen. Operation of the government printing office, another appendage of congress, requires an expenditure this year of $3,294,000.

All the items of expense of congress as listed in the budget for the legislative establishment total $27,309,340. There are other items of expense that do not appear in the legislative budget, as for example, the cost of the postal franking privilege for senators and congressmen. Franked mail matter carried for senators and representatives last year, had it been paid for at regular postage rates, would have added $852,641 to the postoffice department.

The appraised value of the capitol and its grounds is $45,590,000, its rental value $2,729,400 a year. The total cost of congress thus becomes $30,891,381, or an average of $57,633 for each senator and member of the house.

FALSE OR ERRONEOUS PROPAGANDA RELATIVE TO UNITED STATES MATERNAL MORTALITY RATE.

As a matter of fact no reports are comprehensive enough or are based on comparable records showing that the United States occupies fifteenth place or any other position in maternal mortality statistics. No statistics on which such a statement can be based appear to exist.

Because it has been impossible to compare the death rates of different countries, at the meeting of the American Medical Association held in Atlantic City in May, 1929, the Health Section of the League of Nations considered it

important enough to call attention to this matter by posting a chart which bore the caption "International Incomparability of Mortality Statistics." In 1921 the Committee on Maternal and Infant Welfare of the Massachusetts Medical Society issued the following statement: "The undersigned regret the readiness with which medical writers all over the country have been willing to concede inferiority in obstetrics in the United States merely because of foreign statistics gathered under unknown conditions."

Those obsessed with the idea that in state medicine lies a panacea for all national ailments—physical, financial and psychical, material, commercial and artistic—point out continuously and in crescendo that the United States ranks only seventeenth best in the list of countries with reduced maternity mortality. But this they can not prove.

Countries laboring under the burdens of health insurance and state medicine are cited fallaciously as illustrations of what such gag rule of medicine does towards increasing reduction of infant and maternal mortality. And yards and yards of garbled statistics are fetched forth by way of proof. Can this especial article be health insurance and State medicine propaganda?

Now there is only one thing the matter with these statistics; only one little item that makes them basically fallacious. And that item is that one set of standards is used to measure and to compute maternity mortality abroad, and another and an entirely different set of standards is employed in this country. As a matter of fact statistical computation is not precisely uniform in the various states. Even the Federal government itself puts a few extra twists into state statistics when those reach Washington.

Russia, Italy and England are among the countries said to have a lower maternity mortality than the United States. Since 1915 statistics, figures and statements of any sort coming from Russia have need to be regarded with only half an eye and with far more than the traditional grain of salt. Italy has never made public the exact method of procedure for the collection of any of her statistics. Great Britain is probably the most understandable and above board, but even in the sister English-speaking domain there is a definite difference in classification as to what on the death certificate means a demise in childbirth because of a parturition accident or result; or a demise in childbirth from some previous ailment or condition that is aggravated by the mechanics of parturition.

In Russia the state sanctioned practice of abortion, a factor absent from the death rates of any nation. Between the United States and England, all countries in fact, the methods of census taking differ radically. The United States Census Bureau uses the blanket term of "puerperal state."

With the lack of all uniformity in the method of gathering maternal mortality statistics or any other statistics, death rates in different countries cannot be compared with the slightest degree of accuracy. It is like measuring milk by the quart in one hand and by a yardstick with the other.

In the second place, the practice of specifying the cause of mortality and of classifying death certificates according to cause varies significantly not only in different nations but in different political units within each country. An illustration of this fact is the percentage of deaths attributed to "unknown" causes and to "old age" in the different countries. Out of a dozen leading nations only four reported in 1927 anything like as low a ratio of deaths from "unknown causes" as did the United States. These 12 countries with the death rate per 100,000 reported as of "unknown" causes and from "old age" in 1927 were as shown in the table:

DEATHS PER 100,000, 1927

Cause specified as:	"Unknown"	"Old Age"
Belgium	57	144
Denmark	23	151
Finland	72	74
France	171	219
Germany	4	129
Hungary	180	256
Netherlands	17	52
Norway	58	147
Sweden	26	177
Switzerland	13	44
England and Wales	3	58
United States	17	11
Illinois	3	5

"Unknown" of course is a debatable and slip-shod term and a generic alibi. Yet in the 1910 death registration area of the United States, and embracing practically two-thirds of the population, the death rate per 100,000 ascribed to "Unknown Causes" in the United States in 1917 was only three. American physicians are conscientious in seeking to establish causes of death and honest enough to inscribe

these causes in the records and that rate of "three unknown" is lowest of all other countries save one!

Birth registration in the United States is far more lax than in Europe—admittedly at least ten per cent. off. The statistical trend in this country however is to treat maternal mortality now as once was done with old age or "senility deaths."

HIGHWAY ACCIDENTS AND THEIR CARE BY DOCTORS AND HOSPITALS.

Dr. F. D. Vickers, Deming, New Mexico, in *Southwestern Medicine* for December, 1932, has much to offer relative to highway accidents and their care. We quote:

There has been in the past few years a steady increase in highway accidents, till now the death rate is much like modern war and the injured number something like one million per year. This same condition seems destined to overtake many nations. England last year had more killed and nine times as many wounded on her highways as she lost in three years of South African war. War stops in time, but there seems to be no way to halt this great epidemic.

Our mass psychology seems to take all this for granted. We note the millions of miles our railroads run without fatality, we are conscious of safety-first in our industries, our street cars have carefully selected motormen, and yet we allow the children, the woman who faints on slight alarm, the man who is half drunk, and about all our mental and physical incompetents, to run two-ton and runabout locomotives through crowds, and speed faster than trains up and down our highways; and our sense of alarm seems stupefied—they are only highway accidents.

I have no remedy to offer, but I hope some means may be devised that will take care of the injured on some such plan as they buy gasoline. Most of these accident cases do not carry insurance, or at least the right kind of insurance. If they do have the right kind of insurance there is a settlement up a legal lane at some place and time remote from the scene of the accident, and if the accident cases win in two or three years from a higher court, then, when the lawyer is paid, and if they are honest—and we sometimes lament with the old woman, "If burglars were only honest,"—well, after all of this, the hospital and the doctor may or may not be paid, less the pleasure trip to court as a witness.

Many states have passed "financial responsibility" laws, varying in character, but in general requiring proof of ability to pay damages in case of responsibility for accidents—and the motorist usually carries liability insurance.

Compulsory liability insurance is required of all motorists in Great Britain and some Scandinavian countries. Some forty of our states require taxicabs and busses to be covered with liability insurance to protect not only passengers but pedestrians. Quite a number of states require freight cars to carry this liability insurance.

Massachusetts has required the passenger cars to carry liability insurance, but this does not apply to out-of-state motorists. Under the Massachusetts law, more claimants are able to collect damages, but trials are delayed as long as in other states.

It would seem a logical conclusion that we should work out in the various states, insurance on the lines of industrial compensation. Twenty years ago our industrial compensation was in about the same status as our automobile insurance is now. Practically all of the states have passed legislation entitling workmen to compensation regardless of whose fault causes the accident. The employer is required to pay the premiums. The workman proves to the state board the facts of his case and the gravity of his injuries. The cases are not taken to court except on appeal from the decision of this board.

The workman's compensation principle is now so well established that the Ballantine Committee has reported a tentative plan, having for its basis the New York Workman's Compensation Act to be carried to the automobile field. It provides compensation to all persons disabled for more than a week; to the dependents of persons killed, for funeral expenses and medical care. The cost of such insurance would depend on the liberality of compensation. This would be handled at once by the state board and kept out of court, thus sparing attorney's fees, which are no small item. The Ballantine Committee, having as its chairman Mr. Ballantine of the New York bar, also assistant secretary of the treasury, investigated more than eight thousand

personal injury cases in different localities, court records and state laws bearing on compensation problems; making the first complete study of compensation in automobile personal injuries and deaths. The Committee goes on record as favoring compulsory liability insurance on part of automobile owners, and proposes law to cover the treatment and care of injured persons to be borne by the owner of the automobile responsible for the accident.

The National Safety Council estimate, from studies of accidents in eight states having a system of driver's license which throws out a few of the obviously unfit, reduction of the expectation of fatalities by 29 per cent. Private passenger vehicle fatal mishaps have increased 50 per cent. in the past four years, and in the same interval of time the number of truck deaths decreased 6 per cent., fatal accidents from taxicabs decreased 35 per cent. despite a large increase of such vehicles, and bus accident deaths declined 12 per cent.

This compulsory insurance would compel drivers of cars to pass examinations and have driver's license.

The economic losses resulting from highway accidents are immeasurable, and they fall heavily on the hospitals and physicians. An idea of the enormous loss from these injuries and deaths may be had by considering what it costs our government to cover our war injuries and deaths, and they correspond to one and a half years of automobile accidents; and these accidents go merrily on while war stops to breathe.

The Columbia University Council for Research in Social Sciences studied compensation in automobile accidents in 313 fatal accidents. Insured cases were able to meet cost of funeral and medical care in 77 per cent, and part payment in 11 per cent. In only 12 per cent. was there no payment. Of cases not covered with insurance, payment was made in only 7 per cent., part payment in 8 per cent., no payment in 85 per cent. In Philadelphia Hospital free treatment was given to 62 per cent. of cases. Of those who were charged, one-third of the amount was unpaid at the end of one year. In New Jersey, of 1781 automobile accidents, 56 per cent. of hospital care was paid. In Ohio, 1930, 50 per cent. was considered non-collectible.

A logical conclusion would be that we seek to have our various states pass laws compelling automobile owners to carry insurance along the line of workmen's compensation laws at present in force; to provide a state board to settle these cases instead of going to courts; that the settlement should take care of the hospital and medical cost of the cases; and that the state should have a system to license drivers; that we encourage the legislation committees of our state societies to carry this matter to their legislatures.

THE ANNUAL MEETING

The 1933 Annual Meeting held in Peoria on May 16, 17, 18th, will go down in history as one of the best meetings of all times. Although the weather was not favorable, the attendance was greater than at any previous down-state meeting —the total registration almost reaching 1,400, with more than eleven hundred members present.

Everything was arranged to the best advantage so that the exhibits and the Section meetings, as well as all general meetings, were held under the same roof. Scientific meetings were handled well, and progressed satisfactorily. The Oration in Medicine, Oration in Surgery, and the President's Address were attended by an unusually large number of members, and were excellent presentations.

The President's Dinner on Wednesday evening was attended by nearly four hundred, and the only address made at this interesting function was that of the Chairman of the Council, Chas. D. Center, when the President's Certificate was presented to Dr. Neal. This address was broadcast by Radio Station W.M.B.D. The President's Dance following the Dinner was well attended.

There was an unusually large attendance on Thursday morning, when the Joint Session of all Sections was presented, the speakers selected from each Section to present subjects of general interest.

The two Sessions of the House of Delegates were held on Tuesday afternoon, and Thursday morning, and both were well attended, and much business was transacted. At the closing meeting, the House of Delegates by resolution, thanked the many Peoria groups, the Peoria Medical Society, the Arrangements Committee, and its Chairman, C. G. Farnum, for their constant effort to make this an outstanding meet-

ing. The Peoria press was highly cooperative throughout the meeting, and received a special vote of thanks for the many manifestations of their desire to aid the Society in every way possible.

The House of Delegates voted to meet in 1934 in Springfield, subject to suitable arrangements being made by the Council. The following officers and committees were elected at the closing session of the House of Delegates.

President-elect ....Chas. D. Center...Quincy
1st Vice President..C. G. Farnum.....Peoria
2nd Vice President.H. V. Gould.....Chicago
Secretary .....H. M. Camp....Monmouth
Treasurer .....A. J. Markley...Belvidere

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Andy Hall ..... 9th Dist. ....Mt. Vernon
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Historian.....Irving S. Cutter.....Chicago

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Mather Pfeiffenberger.....Alton
C. E. Humiston.....Chicago
C. B. Reed.....Chicago

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Andy Hall.....Mt. Vernon
F. P. Hammond.....Chicago
F. L. Brown.....Chicago
R. J. Coultas.....Mattoon
G. Kaufman.....Chicago

SECTION OFFICERS FOR 1934

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R. F. Herndon, Chairman.....Springfield
Don C. Sutton, Secretary.....Chicago

Section on Surgery

George W. Post, Chairman.....Chicago
B. V. McClanahan, Secretary.....Galesburg

Section on Eye, Ear, Nose and Throat

George S. Duntley, Chairman.....Macomb
O. B. Nugent, Secretary.....Chicago

Section on Public Health and Hygiene

J. Howard Beard, Chairman.....Urbana
Lloyd Arnold, Secretary.....Chicago

Section on Radiology

Robert F. Arens, Chairman.....Chicago
F. Flynn, Secretary.....Decatur

SECRETARIES' CONFERENCE

H. A. Felts, President.....Marion
Elizabeth R. Miner, Vice President....Macomb
C. D. Snively, Secretary.....Ipava

Dr. Irving S. Cutter of Chicago, was re-elected as Historian for the Society.

The 1933 Annual Meeting will be long remembered as one of the best meetings the Society has ever held.

ON THE EUROPEAN

After the fall of the Herriot government, an American, registered at a de luxe Paris hotel, approached the boniface with his bill in his hand and asked:

"Am I on the American or European plan?"

"On the European plan, of course," the hotel man replied.

The American smiled and commented, "Then I don't pay, eh!"

CHARLES C. CENTER IS PRESIDENT-ELECT.

In choosing Charles C. Center as president-elect of the Illinois State Medical society, physicians of our commonwealth have shown rare wisdom.

Dr. Center, who is both "M.D." and "F.A.C.S." comes from Quincy, Ill., and spent his boyhood on a pioneer Illinois farm. The lessons he learned there in his youth stood him in good stead when as colonel in command of the 130th Infantry regiment and later commanding trains and military police. Dr. Center went all through the thick of the fight with the famous "Thirty-third" whose part in winning the war is one war record that nobody questions. He saw the whole show from Quincy, Ill., to Luxembourg, via Texas and the Meuse and the mud. In fact his war work went further than that. He began with the "home guards" and so far back as 1905 was assistant surgeon, medical corps, First Illinois Infantry. Dr. Center has dipped into literature and has some notable poems and prose to his credit.

ILLINOIS DOCTOR HOLDS PRIORITY CLAIM FOR THE USE OF RADIUM IN INSANITY.

Dr. G. Frank Lydston claimed and claimed accurately precedental rights to the Voronoff discovery. Another feather in the cap of Chicago medicos is that by Dr. Finley John in the Illinois Medical Journal. In May, 1927, appeared an article by Dr. John on the use of radium in mental cases that parallels and possibly anticipates the tremendous interest in France to-day of the miraculous results of radioactivity in the treatment of insanity.

We have in our possession translations from the French of reports by three able French scientists upon this treatment.

These are entitled "Medical Applications of Radioactive Emanations According to the Studies of Georges Vaugeois"; "Emanotherapy by the Vaugeois Method by Dr. Cherigie"; "Artificial Radioactive Waters, Siecle Medical, May, 1932"; "Association of Diathermy and Emanotherapy by P. Gasquet, M.D." and "Emanotherapy—Radon-Thoron."

Your attention is called also to this excerpt from *Le Journal* of Paris as to the work by Prof. Gabriel Petit who injected very diluted radioactive salts into the veins of horses.

Says the interview in "Le Journal,"

"Professor Petit had remarked that the metal fixt itself in the nervous centers.

"The idea occurred to him to apply the same treatment to man.

"He did not mean to make the application directly.

"Instead of injecting the radioactive 'salt' he injected the serum of horses already 'radio-activated.'

"His experiments took place first of all at Charenton with the aid of Dr. Marchand, and later he worked at the Henri Rousselle hospital under the 'control' of Drs. Toulouse and Courtois.

"The radioactive salt employed was thorium X.

"Some fifty-two patients afflicted with melancholia, mental confusion, and even raving madness, were treated.

"The results have been encouraging, for more than half the patients were cured, while a large majority of them were improved by the treatment.

"Professor Petit has ascertained definitely that the serum does not act through the medium of shock, but by means of the radioactive substance it contains.

"We may therefore say with a reasonable degree of confidence that we have here a new method of treatment for patients whose cases are often pronounced hopeless."

LAY PRESS AWAKENS TO MEDICAL ECONOMICS.

In the June, 1933, issue of the *Ladies Home Journal* Loring A. Schuler presents in an editorial a direct appeal to the several millions of subscribers to this periodical to

"Pay your doctors' bills promptly!"

The medical profession seems to have gained in Mr. Schuler exactly that sort of a partisan as he himself calls the family doctor of whom he says:

"The true family physician is a friend in need who puts service to humanity ahead of money or comfort, or even his own family. He deserves better support than he is getting. There is just

one remedy for a situation that is starving and embittering him, and that is wholly in the hands of his patients,

"Pay your doctors' bills promptly!"

Raison d'etre for his timely editorial Mr. Schuler states in the beginning when he quotes one of his "midwestern readers," who writes to him to say that

"My husband worked nine hours today and came home with one dollar which he had collected for his services. It is hard for a family of five to live on one dollar a day. Yet my husband is not a downtrodden ditch digger, nor is he assistant to the garbage collector. He is a presumably successful physician, with a high standing in the community for professional ability, business integrity and a great kindliness toward people in distress.

"In discussions of the costs of medical care, we frequently see the statement, 'The doctors charge too much.' Every doctor's wife will tell you that that is literally true—but what we mean is that the doctors charge too frequently. Because it often seems that the average family pays some of its bills on the first of the month, most of them eventually, and the doctor's bill last, if at all. Why do they forget so quickly?"

Commenting upon which Mr. Schuler writes, in a statement both competent and able,

"The condition of which this doctor's wife writes is common over the whole country. Money is scarce, yes—but it is no more plentiful in the homes of the doctors. They, too, must buy food and clothing. They, too, must pay promptly for gasoline and electric lights and telephone service. The high ethics of the doctor's calling force him into more charitable service than the plumber, for instance, is expected to render; but if the plumber doesn't pay the doctor, how is the doctor in turn to pay the plumber?

"The members of the medical society in one big Eastern county report that 18.6 per cent of their income is not collectible—and the chief cause is given as 'indifference of patients.' Many of them are trying to maintain their homes, their offices, their necessary means of transportation, and the medicines and equipment which they must have for the relief of the sick, on incomes of less than a thousand dollars a year. And many of them, proud as they are of their professional standing, are today simply forced to accept public and private charity to keep going."

THE TENDENCY OF DOCTORS TO ACCEPT SALARIED POSITIONS.

In case you are wondering what the editor means when he crusades continuously against "Tendencies in Medical Practice," here are a few of them, if not in a nutshell at least in a table. The survey covered sixty-nine medical colleges. Approximately 35 per cent. of those graduating from medical schools in 1925 limited their practice to a specialty within six years after graduation. An additional 35 per cent. of graduates look forward to the same kind of a career. These percentages were on the increase up to 1920.

That there is an increasing tendency for men to enter the practice at older age than previously, can be attributed only partially to the increased requirements.

That more graduates are practicing in the larger communities than seems justifiable according to population distribution.

That approximately one in every six graduates is destined to hold a full-time salaried position.

That 99 per cent. of the 1925 graduates located in the United States and that 39 per cent. of Canadian graduates also located here.

Now 48 per cent. of the population is in communities of less than 5000 and only 19 per cent. of the 1925 graduates were to be found there. Modern transportation methods prevent serious consequences arising from this situation, but it is improbable that this is the cause of it. The drift of graduates to the cities in this day would have occurred regardless of transportation methods and the means of reaching the farms. It is not confined to the practice of medicine.

It is possible that as the old practitioner's death leaves an open space in the village there will be a greater tendency on the part of the young man to fix himself in it than there was when it looked as if all the money were in the city. Times are changing in more ways than one.

Six years after graduation, 17 per cent. of the graduates of 1920 and 1925 were occupying full-time salaried positions.

If those positions were in large measure with private institutions and corporations, there is much that is alarming about it. If they are public payroll positions, the tendency in that direction well may be the subject of examination.

There is no question of the rapid encroach-

ment of that kind of practice of medicine. We are not sure where the promotion of this kind of practice lies, whether with the medical colleges or elsewhere. In the matter of getting on the public payroll more and more graduates of engineering and agricultural schools, the schools are under suspicion.

DESPITE ANTENATAL CARE, MATERNAL MORTALITY IN LONDON SHOWS NO DECLINE

The A. M. A. London correspondent under date of July 2, 1932, under the heading "Maternal Mortality Undiminished" says:

A fact causing much concern is that, while infant and general mortality have much declined, maternal mortality, despite the introduction of antenatal care, shows no decline. It is thirty years since the routine supervision of the expectant mother, normal as well as abnormal, was introduced by the late Dr. J. W. Ballantyne of Edinburgh. The widespread establishment of antenatal clinics has been one of the most important advances of preventive medicine of recent years. Dr. F. J. Browne, professor of obstetric medicine in the University of London and director of the obstetric unit of University College Hospital, in a paper on maternal mortality contributed to the *Lancet*, points out that while in 1911 the puerperal mortality was 3.87 per thousand live births, in 1930 it was 4.40 and that the figures for puerperal sepsis mortality were, respectively, 1.43 and 1.92. The mortality from eclampsia has not declined. Investigating the causes of this persistent high mortality, Professor Browne examined thirty-three reports of nine maternity hospitals of the highest standing in order to find the causes of death among women who had received antenatal care and the frequency of eclampsia among them. His conclusions are as follows: 1. Antenatal care cannot appreciably influence the frequency of death from postpartum hemorrhage or shock after easy uncomplicated labor, which accounted for 1 in 5 of the 173 deaths examined. 2. The incidence of complicated and obstructed labor from disproportion and similar causes is being diminished. But a good many cases are still unprevented and the discovery of others often leads to induction of premature labor and cesarean section. Professor Browne thinks that much of the interference is unnecessary and constitutes meddlesome midwifery. The figures show that instrumental induction of labor accounted for 8 deaths out of 173, even in the best surroundings and in well organized hospitals staffed by experts. He also thinks that cesarean section is often done unnecessarily and can be dangerous, even in clean cases in the best surroundings and with expert skill, as is shown by the fact that it accounted for 18 deaths out of the 173. "Women are saved from obstructed labor only to run the possibly less, but still considerable, risk of induction of labor and cesarean section. In possibly a quarter of such cases the operations were unnecessary." 3. Antenatal care can do little or nothing to prevent such frequent causes of death as antepartum hemorrhage, which accounted for 1 in 10 of all the deaths. Possibly more might be done by taking note of slight warning hemorrhages and admitting the patient immediately to the hospital. 4. In one-seventh of the cases the causes were such as antenatal care could not prevent—rupture of the aorta in the second stage, cancer of the cervix, and influenzal bronchopneumonia. 5. Clinics are not doing all they might to prevent eclampsia. The defects are failure to estimate blood pressure, insufficiently frequent return visits, insufficient realization of the importance of edema as a premonitory sign, and delay in instituting adequate treatment.

A EUGENIC SUPERSTITION

Medical Times and *Long Island Medical Journal,* September 1932, says editorially. We quote:

Henry Fairfield Osborn, one of the country's most famous scientists, writing in the August *Forum*, pleads ably and eloquently for birth selection versus birth control. He says, speaking of birth control: "Especially in the hands of its chief propagandist in this country, Margaret Sanger, it is fraught with danger to society at large and threatens rather than insures the upward ascent and evolution of the human race." It is the "best" strains that are threatened by birth control, which, like a two-edged sword, is thought to be eliminating alike the fittest and the unfittest, and so, as regards the former, to be dysgenic in effect.

It is probably the so-called fittest who resort to abortion with greater relative frequency, and it is the abortion factor, rather than the contraception factor proper, that is effecting biologic carnage. For practical purposes, contraception must be thought of as implying much abortion, since contraception of itself, as now applied, is pretty much humbug. In any case, the resultant decimation may be called birth control, and that is what is in Professor Osborn's mind.

Professor Osborn is wholly correct in claiming that the so-called better classes are menaced in the fashion indicated, but some writers' assumption of a hereditary eugenic aristocracy within the alleged better classes (the Galton doctrine) does not arouse our enthusiasm at all. Genius, which is the source of all our progress, does not derive from the "best" strains; high talent, of course, may and does. Genius derives from so-called bad stock, as Christianity germinated in the slum proletariat of the Mediterranean cities. That so-called bad Christian stock was really good stock, hatching great saints and scholars and artists. The stock of genius, in the words of Emerson, is like the oyster which, wounded, mends its shell with pearl. Genius as manifested in creative works of beauty and unique spiritual or mystical or intellectual significance and power is a refuge alternative to more seemingly tragic havens, open to the potentially neuropathic who are so constituted congenitally as to be able to avail themselves of it. Neurotic perdition is thus dodged. Genius, then, is this particular type of reaction to life. For such an individual each one of these alternative reactions is no more and no less a *via crucis* than the other, which explains the traditional "thin wall" between genius and insanity.

Needless to say, Professor Osborn's "best" strains suggest no neuropathic connotations, but only an especially powerful urge, resting upon good energy endowment and the formation of certain trends and psychic patterns in childhood, to attain success and prestige in the present world of reality—an urge conditioned by the degree of immediate desire for self preservation.

Of course, we don't wish birth control (contraception plus abortion) to menace either that which we owe to the eugenic aristocracy or to the strains that beget genius. But Professor Osborn need not trouble himself so grievously over the multiplication of the "unfit."

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THE TRIALS AND TRIBULATIONS OF AN EDITOR, OR ANY OFFICER OF THE MEDICAL SOCIETY, ARE GREAT

Dr. Olin West in discussing the trials and tribulations of medical editors and other officers of any medical society among other things mentions the following:

The trials and tribulations of an editor, or any officer of any medical society, are great, as you all know.

I recently heard of an incident in which a physician had written what was, in his opinion, a very splendid scientific paper, and sent it to the editor of a certain journal. The editor sent it back with a letter saying that while it contained some very excellent material, it was much too long, much too involved, and would not be read in its present form, and asked the writer to cut it down. He received in answer an insulting letter to the effect that the writer knew what he wanted to say and how to say it. Of course, he did not get very far with that. The editor told him, however, that he was going to take the liberty of having the paper revised and would then submit it to him. He turned it over to a manuscript editor who reduced it by about half and it was then returned to the physician without any comment or any marks of identification. A telegram came back saying that this was the best paper on the subject the gentleman had ever read, adding: "You can throw mine in the waste basket." It was his own paper, properly edited, with some of his idiosyncrasies eliminated. The paper was published in its revised form and created a good deal of favorable comment.

WE CAN IMAGINE WITHOUT DIFFICULTY WHAT CONDITIONS WOULD BE LIKE IF THE PROFESSION SUCCUMBS TO POLITICAL CONTROL

An editorial in *Medical Times* gives the following outline of one duty under socialized medicine;

Among the consequences of lay and political control under socialization would presumably be such a duty as the magazine *Common Sense* proposes:

It has been argued that birth control education is a necessary social job and that the ad-men are doing it. The answer to that is that they are doing it badly, irresponsibly and expensively. Is there any reason why the state shouldn't do this job officially, as the privately financed birth control clinics have been doing it unofficially?

Judging from the recent report of the Committee on the Costs of Medical Care, recommending what is in effect socialized medicine, the medical profession is just about ready to take on this job.

With no reliable contraceptive known to the medical profession, and with commercial concerns competing madly with each other in this dubious field, one can imagine without much difficulty what conditions would be like if the profession ever succumbed to political and lay control.

Measure the effrontery in such proposals and measure the degree of dishonor and corruption expected of the doctor and there will be a keener realization of an impending menace.

DOCTORS OF THE UNITED STATES TREAT WITHOUT COST MORE THAN FIFTY MILLION PEOPLE ANNUALLY

According to Dr. John B. Wright, Raleigh, N. C., there were in the United States in 1920—175 free clinics; to-day we have 8,000. The increase in population in our country in the years 1920-30 was 1.3 per cent; during these ten years, the doctors of the United States treated without cost more than fifty million people annually. Figure this enormous amount out at $2 per patient and you have one hundred million dollars annually, representing the charitable work the medical profession is performing. I doubt if half that sum is contributed by all of the medical foundations in a 10-year period. The medical profession should not be expected to contribute of their funds to all charitable organizations and then treat all the charity poor in our State without charge.

ESTABLISHED FACTS IN ALLERGY

Bray in an article in the *British Medical Journal*, considered the following to be established facts:

1. The allergic diathesis is transmitted as a Mendelian dominant.
2. The greater the heredity, the earlier are the symptoms manifested.
3. The earlier in life the individual becomes sensitive, the greater the tendency to multiple sensitization.
4. Asthma, hay fever, eczema, urticaria, angio-neurotic edema and migraine appear to be intimately correlated and to be interchangeable.
5. A child born in a family with a pure hay fever lineage is much more likely to be affected with hay fever than with asthma, and vice versa.
6. Where several members of one family are affected, sensitization is not identical as regards the specific proteins, nor are the clinical types of allergy or the symptoms displayed in each type themselves identical in different members of the same family.

THE A.M.A. MILWAUKEE SESSION

Railroad Rates

The Southeastern Passenger Association, in addition to the other passenger associations previously mentioned, has announced that tickets will be sold from its territory to the annual session of the American Medical Association at one and one-third fares in accordance with the regulations set down under the heading "Transportation" in the May 13 issue of The Journal.

The round trip rate of one and one-half fares previously announced by the New England Passenger Association has been reduced to a fare and one-third for the round trip.

Section Dinner

The Section on Gastro-Enterology and Proctology has arranged to have its dinner at the Hotel Schroeder on Wednesday evening, June 14, at 7 o'clock. Dr. H. L. Bockus, 250 South Eighteenth Street, Philadelphia, is the secretary of the Section on Gastro-Enterology and Proctology.

Section Reunion Meeting and Smoker

The officers of the Section on Ophthalmology have arranged for an informal reunion meeting and smoker, Wednesday evening, June 14, at about 7:30, in the Skyroom of the Plankinton Hotel. The secretary of this Section is Dr. Parker Heath, 1551 Woodward Avenue, Detroit.

Annual Meeting of Medical Veterans of the World War

The annual meeting of the Medical Veterans of the World War will be held at 9 p. m., Wednesday, June 14, at the Eagles Club, Milwaukee. There will be an informal smoker, reception and luncheon. Dr. Gilbert E. Seaman, 324 East Wisconsin Avenue, Milwaukee, is the chairman of the committee in charge of arrangements for this meeting. Members of the Association of Military Surgeons and all medi-

cal veterans of the World War, including physicians who served as medical advisers to government units and draft boards, are invited to attend.

SHOULD THE CHRISTIAN CHURCH BE DIRECTED BY MEN WHO ARE NOT CHRISTIANS, THEN CHRISTIANITY IS DOOMED. THE SAME IS TRUE OF MEDICINE

Dr. John B. Wright of Raleigh, N. C., in *Southern Medicine and Surgery* says:

Should the Christian Church be directed by men who are not Christians, then Christianity is doomed. The same is true of medicine. The care of the sick must of necessity be centered around and directed by the medical profession. There can never be continued progress in life-saving and public health by turning the management over to others than members of the medical profession. Our health departments cannot function as they should when they are run by laymen and politicians and dominated by lay boards. Medicine must retain control of its own affairs or it is doomed. Medicine had no part in bringing about the financial crisis now upon us, yet this fact does not alter the conditions that medicine must face.

RESTORING THE GENERAL PRACTITIONER TO HIS RIGHTFUL PLACE IN OUR SOCIAL AND ECONOMIC ORDER

The *New York Times* offers the following comment relative to the importance of the family physician:

The new president of the Academy of Medicine, Dr. Bernard Sachs, gave in his inaugural address fresh emphasis to the importance of restoring the general practitioner—the "general medical diagnostician"—to his rightful place in our social and economic order.

The man with broad vision, with calm judgment, with human touch—the family physician—with the full appreciation of the needs of the individual under the present strain of social and economic stress, is sorely needed.

The man of such qualities is needed in every walk of life, but in none more than in that profession which touches life more intimately for most people than does any other.

The family physician ministers to the whole being of man in all its intimacies. He who goes to cure the body of his patient, if he be such a doctor as Dr. Sachs describes, finds that he has to deal also with the soul which is its guest. Sir Thomas Browne said that going to see the sick man he forgot his profession and found himself calling "unto God for his soul." But life is basically a keeping of body and soul together, and the good of the two is inseparable. Human nature includes spirit and body and the doctor has to do with both in their inter-relations. He may not be able to treat the whole body, but "he must be able to treat the body as a whole" and call the specialist to his aid. In the efforts to provide adequate medical advice and care for all of small or moderate means in every community and yet assure reasonable compensation to the physician, the personal relationship between doctor and patient must be preserved as the foundational factor.

STATE HEALTH DEPARTMENT CALLS ATTENTION TO A NEW MOTION PICTURE FILM

The Director of Public Health calls attention of the profession to a new motion picture film relating to diagnostic laboratory procedures and a lecture service on laboratory methods which are now available from the State Department of Public Health for programs of local medical societies. The picture was made by the Department especially for medical audiences. It shows the technique of taking specimens from patients for laboratory examination and how to prepare the specimens for mailing.

One section of the picture shows how to take specimens for laboratory diagnosis of whooping cough by the cough plate method and another shows the newly developed method of taking specimens for dark field microscopic examination in a way that permits mailing to the laboratory.

Other films on the various procedures of diagnostic laboratories, on the manufacture of various vaccines and a popular film on diphtheria lately made by the Department are also available. All of these films are on 16mm. stock.

A lecturer is available from the Department to discuss the procedures visualized in the pictures.

Local medical societies are invited to take advantage of this service in arranging programs for regular or special meetings.

TAKING PRECAUTIONS

Farmer's Wife (to druggist)—"Now, be sure and write plain on them bottles which is for the horse and which is for my husband. I don't want nothin' to happen to that horse before the spring plowin'."

NEED MORE INFORMATION ON PATENT MEDICINE LABELS

U. S. Department of Agriculture in an immediate release letter dated May 11, 1933, says:

Need for more complete and imformative labeling on patent and proprietary medicines and for stricter regulation of patent-medicine advertising is seen by Dr. F. J. Cullen, chief, drug control, Federal Food and Drug Administration, in reports of recent fatalities resulting from cinchophen poisoning. Cinchophen, a chemical anodyne and sedative, is frequently used by sufferers from neuralgia, rheumatic pains, neuritis, arthritis, gout, and similar disorders. The Federal food and drug law, as at present written, does not require the presence of this drug in a medicine to be declared upon the label.

"Mayo Clinic, Rochester, Minn., recently reported five fatal cases due to poisoning from cinchophen which was self-administered or taken without proper medical supervision," says Dr. Cullen. "The patients came to the clinic for relief from jaundice. Atrophy of the liver was the main pathology. As late as October, 1932, the *Annals of Internal Medicine* reported six fatal cases of cinchophen poisoning, four of which were caused by one proprietary remedy. The patients suffered from progressive painless jaundice, associated with other distress, and with pyrosis and vomiting. One patient took 60 grains of cinchophen, another about 45 5-grain tablets over a period of one month. The Administration has recently received reports of a number of other deaths which were directly attributed to poisoning from this drug."

The Federal food and drugs act, in its present form, requires a label declaration only for a few narcotics or other drugs. These are: Alcohol, morphine, opium, cocaine, heroine, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate, acetanilid, or any derivative or preparation of any such substance. This requirement unquestionably, says Dr. Cullen, affords the public some protection. But there is a real need for additional safeguards which could be achieved by amending the law so as to insist that additional habit-forming or otherwise dangerous drugs, such as cinchophen, be declared upon the label of medicines in which they are present. Many preparations containing cinchophen—which should never be used without medical supervision—are labeled so as to meet the present requirements of the pure food and drug law.

"We have noted few cinchophen-bearing preparations which were labeled with remedial claims for arthritis or neuritis," Dr. Cullen declares. "But we have seen a number of such preparations advertised with curative claims for arthritis, neuritis, neuralgia, etc. Such advertising appears in newspapers and radio broadcasts. A medicine containing such a potentially dangerous substance should be used only under the care of a physician. This applies equally to many other patent and proprietary preparations which contain other inherently injurious drugs."

Leaving the needle in place after an intramuscular injection, and injecting 1 to 2 cc. of air will relieve pain and untoward effects frequently.

THE FUNCTIONS OF THE TONSILS

In spite of much research, little is definitely known about the functions of the tonsils. L. B. Seiferth, of Cologne, has recently reviewed at length modern knowledge of the subject, and a perusal of his essay emphasizes the scantiness of this knowledge. He discusses the possible functions of the tonsils under the headings of lymphocyte formation, defensive function, and internal secretion, and he concludes that the only function which has been proved with certainty is the production of lymphocytes. This function the tonsils share with all the lymph glands of the body, and their extirpation cannot therefore, from this point of view, do much to alter the general bodily constitution. In addition, there are good grounds for believing that the tonsils play an important part in the defensive mechanism of the body, and Seiferth believes that the involution of the tonsils at puberty may be connected with the fact that by this time a satisfactory degree of immunity has been achieved. Experiments directed to prove an internal secretion have so far been so contradictory as to be quite inconclusive. Seiferth holds that the theoretical problem can have at present but little influence on the practical one of clinical treatment, which may, in his opinion, be summed up in the two words "chronic tonsillitis"; but the diagnosis of this chronic tonsillitis, and therefore the indications for operation, have not so far been greatly influenced by physiological considerations. The practical side of the tonsil problem is dealt with very directly in a letter of instruction sent to school physicians by the Department of School Hygiene of the city of Boston in the hope that such carefully formulated rules should tend to bring the school and family physicians into better accord. According to these rules the school physician should recommend tonsillectomy and adenoidectomy only:

1. If the child gives a history of repeated attacks of acute tonsillitis or quinsy sore-throat;
2. If the child has suffered from continuous head colds;
3. If the cervical glands are definitely enlarged and have suffered from acute inflammation;
4. If the child has obstructive nasal breathing (adenoids);
5. If the child has suffered from an attack of acute catarrhal or suppurative otitis media;
6. If the child is a mouth breather;
7. If the child gives a history of repeated attacks of pharyngitis, laryngitis, or bronchitis;
8. If the tonsils obstruct the fauces, making the swallowing of food difficult;
9. If the child gives a history of rheumatism, chorea, endocarditis, or nephritis;
10. If there is evidence of a continuous discharge from the nose not caused by a sinusitis or antrum disease;
11. If the tonsil is "buried" and therefore objectively not visible as a large structure, but shows definite evidence of a diseased condition. It does not, however, appear to follow that operation must be advised in all children falling into any of these groups. Nos. 4 and 6 seem to be synonymous, and it should be remembered that there are other causes of nasal obstruction in chil-

dren; No. 11 appears to beg the question, for removal may be advisable when a tonsil "shows definite evidence of a diseased condition" whether it is or is not buried. On the whole, these rules should achieve the purpose for which they have been framed; but truly the "tonsil problem" is too difficult to be solved within so rigid a frame. —*The Lancet,* April 9, 1932.

THE AMERICAN CONGRESS OF RADIOLOGY MEETS IN CHICAGO

Chicago during the World's Fair will welcome the largest radiological congress ever held in the United States when the four national radiological societies will meet here in joint convention. Other members of the medical profession are invited as well. The American Congress of Radiology is scheduled for September 25-30, inclusive, at the Palmer House. According to Dr. Henry K. Pancoast of Philadelphia, president of the Congress, all physicians, physicists, biologists and others connected with the allied sciences will be made welcome at the Congress.

The four radiological societies sponsoring the Congress who have eliminated their regular annual meetings for 1933 in its favor are: The American College of Radiology, the American Radium Society, the American Roentgen Ray Society, and the Radiological Society of North America. The Chicago Roentgen Society will also participate.

Scores of visitors from Central and South American countries are expected to attend the Congress, and invitations have been sent to European colleagues. Over 150 essayists will devote 55 full hours to the scientific program. The six-day program, however, places the scientific meetings to terminate at 2:00 p.m., leaving the afternoons free for visiting the Century of Progress World's Fair. Incidentally, the Fair itself will have remarkable worthwhile displays showing the development of the x-rays and radium in their medical applications.

Dr. Benjamin H. Orndoff of Chicago, chairman of the Executive Council of the Congress, invites members of the medical profession to inquire further of him by writing to 2561 N. Clark Street, Chicago, concerning membership in the Congress, railroad and hotel rates, etc. He points out that the Palmer House is reserving 1,400 rooms for the period of the Congress and guarantees that rates will not be increased or other prices advanced during the session. The Palmer House was selected for the Congress because it is so well arranged for such an event, and the scientific sessions, as well as scientific and commercial exhibits, will all be on one floor.

THE ANSWER IS EASY

A group of pilots were buzzing about something or other as the flight commander approached and several times he caught the expression, "the last word in airplanes."

"Well," he said as he reached the group, "what is the last word in airplanes?"

The group chorused: "Jump!"

Correspondence

THE RECOMMENDATIONS OF THE MAJORITY REPORT OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE CANNOT BE MADE OPERATIVE WITHOUT STATE OR FEDERAL CONTROL, OR WITHOUT DESTROYING THE PERSONAL RELATIONS BETWEEN THE PATIENT AND HIS DOCTOR

Brooklyn, N. Y., May 1, 1933.

To the Editor: The Committee on the Costs of Medical Care had no authority from any Federal or State governmental body; no authority from Organized Medicine, as represented by The American Medical Association and the State and County Medical Societies of this country; no petition by or authority from the People of this nation; that it is just a self-constituted Committee which has been and is being inspired, financed and controlled by *eight* monied Foundations and *two* Uplift or Welfare groups.

That the plan contained in that Committee's majority recommendations is the self-same Compulsory Health Insurance which the People of this and other States fought and defeated in 1919-20, when their Doctors *went to them with the facts,* as your Family Doctor and his colleagues in the County Society should do, now.

The plan, if put into effect, would make the People Cattleized-Card-Indexed-Units and their Doctors and other agencies of healing *panel-ized, impersonalized cogs in a huge political machine* and public and private health a pawn in the game of Social Control by the moneybund Foundations.

These Foundations do know and what that Committee which spent one million dollars in Foundations' money and five years of time should know and *does know,* is that plan cannot be made operative without State or Federal control, or without destroying the personal relation between the Patient and his Doctor, or without destroying the safety of the one and the integrity and moral of the other, as it has done in some of the countries of Europe.

One thing we should promptly realize is that, however grandly that Committee may protest, in its Digest, its Report or in its Newspaper and Radio propaganda that "the sacred relation of

the Patient and his Doctor is dear to their hearts and must and will be jealously preserved'' they know—and you will know if you give it a moment's thought, that they have neither the purpose nor the power to do so—because they know and you know that a Medical Centre, such as they propose, would not be organized a week until it would become a *Discord* Centre—*unless* one of two influences were in control—Money or Power. . . . Money-profit flowing to the group of organizers . . . or . . . authority vested in the dominant political party in the State and Nation and operating through patronage personnel that would be non-medical . . . between the cupidity of the one group and the politics of the other, the sick American Citizen would not have a Chinaman's chance to choose his Doctor or his method of treatment.

What few people know and what most people should know is that the American People have much more to fear from the University, Parlor and Magazine High-Priests of the Congregations - of - Worshippers - at - the - Shrine of Something - Else - than - Americanism than they have from the gutter Communist.

When such self-constituted, Foundation-subsidized Committee on the Costs of Medical Care presumes to speak ''ex cathedra''—drawing around its sacred form the awesome circle of imagined transcendental intellectuality and declaring ''excommunicate'' and ''anathema'' any person or persons who dare challenge the perfection of its analysis and synthesis. . . . When that Committee's successor—The American (?) Committee on Medical Costs dares assume infallibility—forestalling opposition with the threat:—*''If any one wants a fight, he can have it,''* and characterizes such groups as The American Medical Association and the State and County Medical Societies of this Country—and even so humble a Medical citizen as I, as *''bureaucrats,'' ''wielders of self-interest,''* and *''Kidders of the people,''* it is time your Family Doctor and his colleagues in The Medical Society *went to the people with the facts!* so that they—*the people,* can properly evaluate and rebuke this insolent un-Americanism, now, as they did in 1919-20, and that they will keep before their minds, always, the wise counsel of Him who said:—

''You cannot get figs from thistles.''

John J. A. O'Reilly (M.D.)

OBJECTIONS TO MEDICAL FEATURES OF COOK COUNTY EMERGENCY RELIEF FUND

May 1, 1933.

Mr. Robert O. Gardner, Chairman
Emergency Relief Fund, Cook Co.
10 S. LaSalle Street
Chicago, Illinois.

My dear Mr. Gardner:

I am in receipt of your appeal for funds for the Emergency Relief. I wish to go on record as being heartily in favor of the work, and wish to offer you and it my commendation.

However, there are several things that I cannot fully understand about its theory and practice of service,—particularly as it relates to the medical profession.

In the first place, physicians have been solicited, and they have given in cash. Likewise have they given without stint or hope of favor, of their time and energies. But, when a physician is attending a patient who requires continued care and at the same time happens to require aid from the Relief—that physician is dismissed (by the Relief), or is requested *to make no further charge* for his services. But (note the exception) after his being supplanted by a physician selected by the Relief, that physician (the Relief) is paid, and may make as many calls or treat the patient as he sees fit.

Now, if I am not in error, the Relief physicians are not selected from among those who are in actual need themselves, but often from those who have found this large volume of sure pay, albeit small fee patients a lucrative plum.

It seems to me, that in justice to the many physicians who are in dire need of aid, and who know that it is impossible to obtain aid through the ordinary sources, that, among these, this work should be divided, instead of those who in some way are ''in'' with the right group.

I am of the opinion that in one week the Medical Society could render a list of needy, able doctors in all parts of the city. From these the Relief doctors should be selected—whenever the family doctor is not able to cooperate with the Relief.

This communication is my own personal reaction to the matter, and is sponsored by no group or society.

Copies of this letter will be sent to the various newspapers and the Illinois Medical Journal: the *Bulletin* of the Chicago Medical Society. Raymond H. McPherron, M. D.

A STATEMENT IN DOCTOR HUTTON'S ARTICLE WIIICH SHOULD BE CORRECTED

May 23, 1933

To the Editor:

An article by Dr. James H. Hutton, appeared in the May number under the caption of "Medical Economics and Mental Disorders."

The general trend of the article advanced thoughts on a subject which should be given more consideration by the profession. There is contained in the article, however, a statement which should be corrected. Dr. Hutton stated that: "until a very few years ago, patients in the State Hospitals of Illinois were given only custodial care." He also stated that "the state of Illinois provided a large Pen, containing a few buildings, with an inadequate number of beds, a very few Doctors, and a few more attendants, so that the care could not possibly be anything but custodial." This is a broad indictment of the inefficiency of our former state officials and superintendents of the State Hospitals. It is a stinging rebuke to the fair name of our state, for which there is no basis in fact. Illinois has been a leader for many years for the greater liberty of patients in our State Hospitals. Bars were removed from the windows of the old buildings, hideous forms of restraint measures were done away with, such as the Utica Crib, where the patients were locked in. The large and heavy restraint chair riveted to the floor, where patients were chained and locked by means of heavy leather straps, muffs and cuffs, too cruel for adequate description. Open wards were initiated, giving patients the privilege of the grounds; in fact, the comforts and liberty of their homes.

Measures for stimulation and re-education of the retarded types were initiated, and many of these patients were reclaimed for society, which were apparently hopeless. These patients were trained to correct habits formed through loss of initiative, and thus stimulated to higher endeavors for work, play and study. Thus was Occupational Therapy initiated in the Illinois institutions. Female graduate nurses were placed in charge of male wards, thus eliminating the cruelty and promoting more tender and gentle care of the inmates. Many avenues for outdoor treatment were inaugurated, such as golf, tennis, baseball, football, skating (both indoor and outdoor), croquet, hiking, and numerous other means of developing interest.

Patients were grouped for more liberal parole privileges to the grounds, and to the neighborhood environments. Surely, all these measures were not custodial; in fact, every feature that I have mentioned is treatment, and recognized as such by the leading Psychiatrists, and approved many times in the literature of the Psychiatrist and layman.

The singling out of an individual as being responsible for an era of progress in the care of the insane is very unfair to the former Governors, Boards of Administration, Departments of Public Welfare, Boards of Charity and Superintendents of hospitals, who promulgated the humane measures, which I have thus enumerated. I should feel that my eight years of service in the State Hospitals of Illinois went to naught, and, with my colleagues, I should hide in shame and humiliation, were there a scintilla of proof to uphold the allegation of Dr. Hutton.

The crowded condition of the State Hospitals with inadequate bed space is not unusual. It is a problem in many other states as well as Illinois, especially in the territory of large metropolitan areas. Dr. Hutton accuses the much maligned politician for not furnishing sufficient doctors. Statistics were not quoted to substantiate this statement. I am quite sure that the patients in the state hospitals of Illinois have not suffered for the want of medical service. A relative proportion of physicians to the population has always been maintained.

The superintendent of today is presented with newer remedies, formulae and methods to promote research. A perusal of the reports of the Illinois hospitals will prove, however, that the superintendents of yesterday kept abreast with the trend of medical thoughts. If the facilities and equipment for scientific research with a greatly increased medical staff, would be furnished to all of the Illinois State Hospitals, each of the superintendents would have an equal opportunity to wear a halo.

Henry J. Gahagan, M.D.

Original Articles

MEDICINE AND THE CHANGING SOCIAL ORDER*

J. R. Neal, M. D.,
President, Illinois Medical Society,
SPRINGFIELD, ILL.

The year is 532 A.D. From a cloudless sky the sun shines peacefully upon the palace of the Persian king. A Greek physician of Palestine, Tribunus by name, who has been bartered to the Persian monarch for a year of medical service in the royal household, walks briskly through the outer courtyard. His duties have been faithfully and satisfactorily discharged for the full length of a long year and he is about to be dismissed with the blessings of the king. His eye falls upon a company of Roman captives who are hard at work under oriental task masters. He has seen them often during his year of exile.

A few minutes later Tribunus bows before the king in the throne room and asks to take his permanent leave. "What favor may I grant," asks the monarch, "in perpetual token of my appreciation for your valuable services and as an expression of my high regard for you and your profession?" "I have only one request," answered the physician, "may it find favor with your Majesty. My one wish is that you set free that group of Roman captives in yonder courtyard. That service to them will be my only fee."

Not only were those captives named by Tribunus set free but 3,000 other Roman prisoners as well.

Over a thousand years later, on May 24, 1798, Philippe Pinel, a French physician, has just accepted the directorship of an asylum for the insane in Paris. France still breathes the violent air of bloody revolution. Suspicion and fear enshroud the land. Ulterior motives are suspected and sought in every act and innovation on the part of every man and every woman. Boldly accepting full responsibility for the deed, Pinel, at the risk of forfeiting his life to suspicious officials, struck off the chains from 49 patients. That courageous action introduced into the civilized world the practice of extending humane treatment to people with sick minds.

These two isolated examples illustrate very well the spirit that has always lived in the medical profession. What personal gain could Tribunus have expected for obtaining the freedom of penniless Roman captives? What reward was there in store for Pinel that prompted him to put to practical purpose a little sanity in treating insanity?

Medicine is founded upon the principle of service to others. Honor and fidelity of purpose are the touchstones of the profession. Character and honesty liberally mixed with sound knowledge and common sense have been the cherished pride of physicians since the earliest times. Today, in the midst of world-wide economic chaos and in the midst of violent social upheavals, those attributes remain steadfast as the dominant characteristics of the medical profession.

High ideals and the adoption of practical measures to maintain those ideals unimpaired permeate the medical profession more today, perhaps, than ever before. This was vigorously expressed on January 5, 1933, by Dr. Bernard Sachs in his inaugural address before the New York Academy of Medicine.

"In the medical ranks," he said, "we need recruits from our best stock and we want aspiring youths eager to win their laurels in practice and in research. Do not urge any young man to take up medicine because of prospective gain. He who seeks riches or even an assured living would do well to go elsewhere. We do, however, wish to attract men of ambition and of sterling character. Character is more important than all else. Adequate brain capacity is more easily found than absolute honesty of purpose." Further he says:

"So far as medical practice in this community is concerned, the Academy stands for the observance of the strictest ethical principles. It will not sanction a division of fees or any other slightest infraction of the highest ethical principles of the medical profession. In every instance the patient must know what and whom he is paying. Through its Council and its Committee on Professional Standards the Academy has the power and authority to call any of its members to account; so that the public may have a guarantee that the members and fellows of this organization are endorsed as men who practice the art of medicine in keeping with the best traditions of this and former ages. I promise that there shall be no departure from the strictest ethical standards."

This declaration was prompted by no Sena-

*Delivered Annual Meeting, Peoria. Ill. May 17, 1933.

torial investigation. It came not as the tardy bid for public tolerance of a rehabilitated fraternity or one that needed renovation. It was not shouted from the housetops. Rather it was expressed in the quiet rostrum of a scientific building before a medical audience who heartily supported the statement to a man and accepted the declaration as a matter of course. It was not peculiar to New York City. Everywhere the great body of the medical profession lives up to the high ethics and cherished traditions of that honorable calling.

In the medical profession there has been no holiday of service and no moratorium of character. The results of our work stand out in these trying days of shrinking values as a monumental tribute to the solid principles of medical science and the large capacity of physicians to apply in a practicable way the knowledge which has accumulated through the ages.

On every hand we have unmistakable evidence that health conditions have held up remarkably well during the four long years of unemployment and economic distress. Security markets have been demoralized. Industry lies prostrate under the impact of the depression. Commerce on a grand scale has given way to barter and the most primitive methods of exchange. Millions of people in this rich country have been robbed of both the privilege of work and the property that was theirs. Health alone remains practically unimpaired. There have been no major epidemics. Child mortality has actually declined. No man, no woman and no child who has needed and sought medical care has been turned away. The general tone of public and individual health is better than at any previous time in the history of the country. This is monumental evidence that the medical profession has built upon a solid foundation and done its work well.

Not only has the medical profession upheld its own functions with credit and honor to itself and to the public but it has acquitted itself well with respect to national and community problems in other fields. No less than 31 physicians participated in combat at the battle of Bunker Hill. In like proportion they have been found in every capacity among those who have answered the call of their country in every national emergency. To the Declaration of Independence are attached the signatures of seven physicians. Over 300 physicians have served the United States as representatives and senators in Congress. On the roster of membership in the general assemblies of Illinois are the names of 110 physicians. Many doctors have occupied high positions of public trust and responsibility in this country. On the roster of those who have rendered great public service in other nations are the names of many physicians such as that of Virchow in Germany and Lord Dawson in Great Britain.

Many physicians have distinguished themselves in science and cultural subjects outside the field of medicine. Among the great in music, literature and art is found a respectable list of physicians. As for the sciences, Garrison declares that, "Doctors have been the original prime-movers and continuators of botany, zoology, geology, paleontology and the rest of the so-called natural (biological) sciences, and even in mathematics and astronomy such names as Copernicus, Young and Helmholz give color to Huxley's claim that 'Medicine has been the foster mother of all sciences'."

Garrison adds another significant statement. "Wherever the healing function of medicine and safe-guarding role of hygiene are developed and maintained at high levels," he says, "there also will civilization maintain itself at a level correspondingly high." Thus the medical profession emerges in our present civilization as an institution which has not only contributed largely to the comfort and happiness of life but one that has set the pace in intellectual attainments, in rugged self-imposed honesty, in high idealism and in unselfish service. It is a profession that has shared but modestly in the material things of life.

In the light of this history the medical profession acknowledges with no little concern the recent efforts of other agencies to set up machinery that aims to socialize medicine in a way that would rob the profession of its independence and result in no corresponding benefits to the public. I refer to the recommendations of the Committee on the Cost of Medical Care.

Medical service on the whole is primarily and unalterably individual in character. The physician is an individual and by no stretch of the imagination can he be converted into a factory or institution able to generate medical service on a "mass production" scale. The patients

who need medical service are individuals. Each one has his own problems peculiar to himself. The relation between the patient and the physician must therefore be individualistic at all cost. Above all the physician must be able to maintain the confidence and the faith of the patient. This requires freedom of action and a responsibility that reposes altogether in the physician. Under no system of compulsory insurance or public taxation for the payment of medical fees could the physician maintain his freedom of action and feel his personal and complete responsibility for the patient.

Medical service provided by the governments in some states to the unemployed during the present emergency furnishes an example of what may be expected in the event of the socialization of medicine. As one of the rules governing the condition under which the state would pay for medical service the following is quoted from the March 13, 1933, issue of *Health News*, the official publication of the New York State Department of Public Health:

"Each bill shall be chronologically arranged and state the name, age, and address of the patient; the diagnosis or a general indication of the nature of the illness; the nature of the treatment, etc." Experience with the income tax reports and the loans made by the Emergency Reconstruction Corporation are illustrative of how quickly records of this kind may become public property.

Nor have limited schemes tending toward the socialization of medical care for particular classes of patients been an unqualified success. In Logan and Vermilion counties in Illinois, for example, large funds running well over $100,000 each, originally collected under the Glackin tuberculosis sanitarium law, have lain idle for years because of a conflict of opinion among the public servants charged with the administration of these funds. If the administration of a carefully planned socialized scheme of that magnitude breaks down completely what might be expected in the event of more ambitious projects in that direction?

There is a well known principle applicable to every form of endeavor known as the law of diminishing returns. This principle begins to operate quickly in connection with any extended socialization of medicine. In Germany where the great body of wage earners get free medical service through a government health insurance scheme a great increase in imaginary ills has been reported. This results in disadvantage to both the public and the medical profession, the one feeling the baneful effects of a sense of ill health and the other being overburdened with unnecessary work.

In Great Britain, according to official records reported by Lockhart, sickness among insured employees that resulted in lost time and disablement increased 109 per cent. in volume during the decade ended with 1929. The volume of time lost increased from 14,066,000 to 29,500,000 weeks. "It is impossible to believe," says Lockhart, "that the physical condition of our people has deteriorated at this alarming pace and I suggest as an explanation that the increased sickness is largely psychogenic and reveals the existence of a state of mind which must be more widespread and productive of a vastly greater amount of latent incapacity than is manifest in the figures for actual absenteeism, since it must be remembered that these figures take no account of sickness of less than three days' duration nor of the periods of relative inefficiency preceding and following absence from work. . . . "

A knowledge that medical care will be free for the asking together with an unwarranted spread of information that gives an exaggerated idea of what medical science can do to restore health establishes a bad psychology that tends to destroy instead of improve individual and community health.

"The blame for this," declares Lockhart in explaining the psychological effects, "rests as I think largely with a system of education which still pays far too little attention to the mental and intellectual growth of the child and far too much to the mere inculcation of knowledge." Medical service, as every qualified physician knows, is not a panacea that can be depended upon to work miracles of health without the cooperation of the patient himself. It cannot preserve in or restore to health those people who insist for lack of mental capacity and mental discipline upon breaking all the rules of hygiene and sanitation and refuse to be guided in their habits by the advice of medical advisers. The mental attitudes created by schemes which offer free medical advice and care to the rank and file of people tend to defeat the very purpose for which they are created. In spite of its vast

power to heal and to prevent, medicine has no magic wand with which to lift the mental level so that every person would automatically accept and profit by the scientific medical knowledge now available.

The effects of socialized schemes are also unfavorable on the medical profession. Germany has already lost the medical supremacy which she enjoyed for so many years. Students no longer feel it necessary to study in that country in order to round out a complete preparation for the practice of medicine. There has been a noticeable falling off in the international prestige of the German medical profession.

Referring to the influence on the medical profession of the compulsory insurance system in Germany the report of the Lowell Commission on Medical Education says:

"The growth of national sickness insurance has had certain influences on medical education and has affected the assistants (salaried physicians on hospital staffs who teach, do research, supervise hospital patients and handle insurance cases) particularly. There are many disputes over insurance patients and an increasing number of such patients are being sent to the university clinics for study and opinion. The clinical diagnosis itself may not be difficult, but patients usually require exhaustive studies and reports in the nature of quasi-legal opinions to support or disprove the relationship of a given problem to industrial hazards and conditions of employment, or to ability of an individual to work (endeavoring to draw the fine line that distinguishes between eligibility for disability insurance and unemployment insurance, detecting malingering, dealing with insurance neurosis, etc.)

"Nearly all of this type of work devolves upon the assistant and seriously interferes with his research, teaching, and self-development. It threatens seriously to damage or break down the strongest part of the clinical organization and teaching."

Another danger even more obvious and demonstrable is the practice of certain industries which create a veritable human wreckage of employees. From no less authorities than the Industrial Commissioner of New York and the departments of labor in Massachusetts, Connecticut, Maryland and Pennsylvania come reports that women are employed in garment factories at wages that vary from 3½ to 15 cents per hour. These 1932 wage scales can have but one inevitable result, the destruction of health of the wage earners and of their families.

Garment factories may be the extreme in the evils of industrial employment. On the other hand, it is common knowledge that wages have dropped to starvation levels in many lines of industry. This situation has a profound potential influence on any scheme of socializing the practice of medicine. It would make of the medical profession a dumping ground for human wreckage from which industry had squeezed the last drop of vital energy. To lend ourselves to any scheme that favors such a catastrophe would be grossly unjust to the public and it would violate the honor, the integrity and the best traditions of the medical profession.

For the intolerable economic and financial conditions that enshroud the world and particularly the United States, a multitude of reasons have been given. Those whose opinions are worthy of respect agree, however, on one point. This is that industry, commerce and the public have not been able to adjust themselves to the rapid developments of mechanical labor saving devices. Industry tried to take full and immediate advantage of technological knowledge as rapidly as it accumulated without appraising accurately the social consequences. Banking and commercial interests dreamed dreams of making everybody rich by the universal expansion of gambling with other people's money. The ever gullible public tasted only the sugar coating which merely whetted the appetite for more. Conservative judgment was thrown to the winds. The result has been painted with increasing blackness during the almost four years since the thunderbolt of economic storms burst upon the financial horizon of everlasting prosperity.

A significant number of commercial concerns have not hesitated to exploit the medical profession. With an air of impatience at what they imply is apathy among physicians they have seized upon fragmentary scientific knowledge to prescribe universal remedies in order to increase sales. This makes understandable the fact brought out in the Wilbur report which shows that the American people spend seven hundred million dollars annually for medicines and that 75 per cent. of that vast sum goes for self prescribed medicines. That practice, promoted with a vengeance by commercial advertising, cuts deep into the legitimate practice of medicine, and gives the least possible benefit to the public.

Medical knowledge has increased no less rapidly than technological knowledge. Physicians, however, are traditionally conservative. They have accepted new procedures and new equipment only after the practical value and

the substantial usefulness of these things have been thoroughly demonstrated. They have attempted to utilize new knowledge no faster than conditions warranted. They freely admit that the gap has widened between what is known and what is used. They believe that medical service can be greatly extended on the basis of available knowledge. They do not believe that socialization of medicine is the way to do it.

The medical profession has not adjusted itself perfectly to the changing social and industrial conditions. The rapid increase in medical knowledge has had two particularly unfavorable results on the medical profession. It has caused too much specialization on the one hand and a loss of prestige for the general practitioner or family physician, on the other. An outstanding contribution to the welfare of the medical profession would be the correction of this situation.

It has been pointed out that over 80 per cent. of the sickness of individuals is of a nature which may be easily handled by any well trained physician. Fully one-half of the remaining 20 per cent. is such that the underlying condition may never be completely determined no matter how exhaustive the study. The other 10 per cent. is of such a nature that we have at our disposal no adequate therapeutic measures with which to cure it. Recognition of this truth on the part of the profession and the public would bring back into fresh consciousness the important fact that the family doctor is the central figure of the healing art. The individual physician may not be able to treat the whole body but he is able to treat the body as a whole.

There is, of course, a definite field and place for the specialist. He should be a man of extraordinary skill and ability in his particular field. His experience and training should include the general practice of medicine so that specialization would be founded upon a comprehensive knowledge and follow as the result of particular aptitude and skill.

The last few years have brought a series of severe shocks and surprises in respect to economics, finance, honesty or the lack of it in high places and the social order. They have been prolific also in surveys and reports from commissions and committees without number. Bearing particularly upon the practice of medicine and the position of the medical profession in the social order were four reports, three of them issued since the last annual meeting of this Society. These, in the order of publication, are the White House Conference on Child Care, the Wilbur Committee on the Costs of Medical Care, the Lowell Commission on Medical Education and the Ogburn Committee on Social Trends. All have been the results of years of study. The Lowell Commission spent eight years and the Wilbur Committee spent five years in collecting data and in study.

These reports bring together a vast amount of factual information of the greatest value. They deserve calm consideration by the medical profession in order that the public and the profession may profit to the fullest extent by the proper utilization of the information brought together.

All four reports agree and emphasize the need of extending sound medical care to all of the people. All agree that good medical practice depends upon a highly trained, competent medical profession in which honor, integrity, skill and resourcefulness are the outstanding characteristics. To all of this the medical profession adds its full endorsement. Only the Wilbur report had the temerity to recommend socialistic schemes that would demoralize the medical profession and make of the physician the much heralded "forgotten man."

"It is important," says the Lowell report, "that the public insists upon and supports a high quality of medical services and realizes the dangers of efforts to reduce professional care to quantity production, mediocrity, or political control. The level of stability of public opinion determines the soundness, completeness, and effectiveness of health services in any community." That declaration is the meat of the Lowell report which is founded upon the mature judgment of eminently qualified spokesmen who have had the advantages of studying the medical and public health systems not only in the United States but in every civilized country of Europe. To bring this about the Lowell report suggests education as the means for improvement. It would limit the number of physicians, regulate specialization and teach the public what good medical service is and how to choose it.

"Our social system is very strong," says the Ogburn report. "We are very far from revo-

lution. There are other ways out, and something that may be called the American way will develop here." This puts squarely upon the shoulders of any agency which would introduce socialism the burden of proving that a different system from that which we now have would improve matters. This report suggests an adjustment of and improvements in the present system of medical service to meet the needs of a changing social order.

The Wilbur report has attracted the widest attention principally because it has emphasized particularly the cost of medical care. Grasping at the gross figures expressed in the report the public generally feels that the cost of medical care has grown beyond the bounds of reason and has become an unbearable burden. A closer examination of the report shows that people generally get greater value for money invested in legitimate medical care than that spent for almost anything else. It is illuminating, for example, to learn that the amount spent annually in this country for tobacco alone is almost twice the total gross income of all physicians; that spent for candy is more than double the amount spent on civil hospitals; that spent for cosmetics is about twice the expenditures for nursing.

Much is said about the uneven cost of medical care. This is not a problem peculiar to illness and the medical profession. Gross inequalities exist in wage scales and salary rates without regard to the qualifications of employees in different lines of industry and commerce. Losses resulting from bank failures and the collapse of the credit structure have completely crushed some people through no fault of their own while others have escaped with less devastating injury. Even the farmer must take chances upon the weather and the soil, while the tax collected is guided more by the ease of collection and the availability of sources than by a penetrating insight into justice and equity. Furthermore, the medical profession has always regarded the ability of the patient to pay. Much of the uneven cost of medical care, moreover, is a matter over which the individuals concerned could exercise a large degree of control. Automobile accidents, for example, which have created a medical problem of tremendous magnitude, and such preventable diseases as diphtheria, smallpox and typhoid fever result for the most part from carelessness and neglect.

The medical profession has always given its hearty support and cooperation to every reasonable and practical plan for promoting both individual and community health. The health departments of this country were created at the request of and through the efforts of the medical profession. The American Public Health Association came into existence through the efforts of Dr. Stephen A. Smith. The state and national tuberculosis associations were organized by physicians. The American Society for the Control of Cancer is another outstanding agency created by physicians. Perhaps it is not too much to say that the American Society for the Control of Cancer is an example of the ideal voluntary public health agency. With dignity and respect to the intelligence of the medical profession this society has quietly gone about building upon a campaign against a great and growing health menace which deserves the support of physicians everywhere. Physicians have guided the activities and policies of these and similar organizations which have been a large factor in the preservation and improvement in public health.

The economics of medicine is a subject too broad for the scope of this paper. We are apparently in the midst of great social and economic changes. The medical profession will find it necessary to adjust itself to meet the needs of new conditions. Calm consideration and wise judgment of conflicting proposals will be needed to steer us along the proper course. A strong organization and steadfast loyalty to the traditions and the ethics of our profession are necessary to the welfare not only of the physicians of this country but of the public as well.

Many plans for adjusting the rendering of medical care are now on trial or in process of adoption. The periodic payment plan for the purchase of hospital care, for example, has been adopted by groups in various cities throughout the United States. This plan has been sanctioned and endorsed in principle by the Council of the American Hospital Association which advocates its cautious adoption for people with limited incomes.

Agreements between county medical societies and county officials for the medical care of in-

digent people appear to be operating satisfactorily in some localities.

All such developments are under the closest observation of the American Medical Association and its various component units. The medical profession will look with favor upon any system of improving individual and community health which will leave the control of medical matters in medical hands and that will maintain the integrity, freedom, self respect and honor of the individual physician and the individual patient. It will be opposed to plans that involve public taxation, compulsory insurance, special privileges, political control and un-American social practice.

In a recent enumeration of the principles that he declares should underlie the American government, John W. Davis, one time candidate for president, said:

"The chief aim of all government is to preserve the freedom of the citizen. His control over his person, his property, his movements, his business, his desires, should be restrained only so far as the public welfare imperatively demands.

"Taxation," he continues, "can justly be levied for no purpose other than to provide revenue for the support of the government. To tax one person, class or section for the benefit of another is none the less robbery because done under the form of law and called taxation."

Mr. Davis goes further. He believes that the genuine American is a liberal with a liberal's outlook on life; loving freedom for freedom's sake; believing in the wholesome virtue of self-help; hating privilege in whatever form; wishing nothing for himself from the government that his neighbor cannot also enjoy; willing to think of the rights and interests of other men equally with his own; trusting in the best and not the worst in human nature to prevail; and looking to a reign of good will, mutual aid and cooperation as the ultimate goal not only of men but also of nations.

With these views the medical profession finds itself in hearty accord. For these reasons it will oppose all schemes to socialize medical practice to the detriment of the individual.

To summarize briefly let me say that the medical profession is opposed to schemes of taxation and compulsory insurance in respect to medical care for the following reasons:

1. Such schemes are un-American and contrary to the principles of government and social philosophy in this nation.

2. They would stifle individual incentive and initiative on the part of physicians to do their best work.

3. They would inevitably involve political manipulation and control with all of the evils which political activities have shown themselves capable.

4. There is no reason to believe that compulsory health insurance or the spread of the cost of medical care by taxation would result in more favorable health conditions. The general health conditions in the United States, as reflected in mortality returns, the average length of life and the prevalence of sickness are superior to those in any large European nation where health insurance schemes have been employed. In limited areas of the United States comparable in size and population to the smaller nations of Europe where the practice of medicine has been socialized, health conditions are equal to or superior to those in such nations.

5. A system of educating the public and the profession to the importance and capability of the general practitioner; limiting the number of physicians and giving them superior training; strengthening our existing public health agencies and promoting the wholesome virtue of self-help will meet more satisfactorily the needs of American people than would schemes to socialize the practice of medicine.

Let me commend to your thoughtful consideration the various reports concerning medical care which have lately been published. Let me urge you to be alert and watchful during these days of tremendous changes in the social and economic order. Above all let me stress the superlative importance of loyalty for the medical society, local, state and national. Only through strength of numbers and wise leadership can the medical profession steer aright its course through the stormy waves of social turmoil that sweep over us.

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THE TREATMENT OF PERIODIC HEADACHE WITH CHONDROITIN SULPHURIC ACID*

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While studying the action of chondroitin sulphuric acid in peptic ulcer,[1] we observed a striking effect upon the headaches of which a number of the patients complained. The headaches in these cases were not due to previous alkali therapy. In two of the patients, the headache was definitely migrainous in character. It therefore appeared worth while to investigate further the efficacy of chondroitin in headaches of various types.

In any such study, the difficulty of classifying headache is a factor that must be considered. Pain in the head is frequently due to known causes such as errors of refraction or sinus infection. We have attempted to eliminate all such cases, and to include only idiopathic headache in our series. Of these, a certain percentage present the classical symptoms of migraine, in others the syndrome more or less closely resembles that of migraine, while a third group can be classified only as simple headache. Obviously, diseases are best classified on the basis of etiology. In the absence of any knowledge of the etiology of headache, and since the various students of the problem lay down different requirements for a diagnosis of migraine, the adoption of any criteria is open to criticism and to probable revision in the light of further information as to the causative factors. The division of headache into sub-groups is further complicated by the fact that different types may be presented by the same patient, as in cases that have dull bilateral headaches without an aura occurring in the intervals between attacks of typical migraine. In other cases the character of the headache changes markedly in the course of years.

Nevertheless, a fairly definite syndrome, the modern name for which is migraine, has been recognized for centuries. It appears necessary at least to attempt to classify our cases with regard to this commonly recognized condition. The periodicity of the headache, its appearance in members of the same family, the aura, its unilateral character, and the nausea and vomiting that accompany it are generally recognized as the common symptoms of migraine. No question would arise concerning the diagnosis of a case that presented all of these characteristics. We have considered it preferable to exclude from that classification some cases that may be migraine rather than to make our criteria too elastic.

Migraine Group: We have therefore included in our series of cases of migraine only those that present both periodicity for at least two years and a familial tendency as evidenced by the presence of "sick headache" in some other members of the family. In addition, we also require that in order to be termed migraine, the patient at some time must have had two of the other three characteristics (aura, nausea and vomiting, or hemicrania). Of the twenty-five cases in our series, classified as migraine, aura is present in twenty-three. The visual aura is most common, being present in fourteen; in six, the aura consists of a feeling of depression which is so definite that the patient knows that a headache is about to occur; one complains of cold feet for a few hours prior to the onset, another of pressure in the head, and another of dizziness. Nausea occurred in twenty-four cases, vomiting in twenty-one, and hemicrania in twenty. It will be noted that an exception has been made in Case 24, Table 1. This patient has had periodic headache for one and one-half years instead of the two years that we require, but since he is only nine and one-half years old, and since typical migraine is present in the father, it seems necessary to regard this case also as migraine.

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TABLE I. CASES OF MIGRAINE

Case	Sex	Present Age	Age at Onset	Months on Treatment	Days Between Attacks		Severity of Attacks		Recurrence without Chondroitin
					Before Treatment	During Treatment	Before Treatment	During Treatment	
1	Male	38	18	2	7	10	Moderate	Moderate	
3	Female	49	35	5	7–10	10–20	Severe	Moderate	
4	Female	27	15	7	7	None	Severe		Yes
5	Female	30	22	12	7–28	None	Severe		Yes
7	Female	30	7	7	2–5	None	Moderate		Yes
8	Female	39	13	6	14	None	Severe		Yes
9	Male	36	6	12	7	None	Severe		Yes
11	Female	49	34	10	7	None	Severe		Yes
12	Female	43	23	6	28	None	Severe		
13	Male	10	5	4	14–28	45	Severe	Moderate	
15	Female	37	24	3	28	None	Severe		Yes
17	Female	25	15	6	7	None	Severe		Yes
18	Female	30	10	4	7–14	20	Severe	Sev.-Mod.	
19	Male	29	27	9	4–10	14–20	Severe	Sev.-Sl.	Yes
24	Male	9½	8	5	7–30	Rare	Sl.-Sev.		Yes
33	Female	26	15	4	7	15–25	Moderate	Slight	
34	Male	42	15	2½	7	7	Moderate	Moderate	
35	Female	41	16	3	14	Rare	Mod.-Sev.		Yes
36	Male	54	12	3	4–7	5–7	Severe	Mod.-Sev.	
39	Female	44	19	4	14	30	Severe	Mod.-Sev.	
40	Female	38	19	1½	7	7	Severe	Severe	
44	Female	27	24	4	28	None	Moderate		Yes
49	Female	26	21	3	7	10	Severe	Slight	
51	Female	34	14	6	28	None	Moderate		
55	Female	26	16	5	28	None	Moderate		Yes

Migranoid Group: Certain other patients present many of the characteristics of migraine but cannot be so classified under the requirements noted above. We shall refer to these patients as the migranoid group. Of ten such cases, six present definite periodicity, eight a positive family history, four a hemicrania, and nine nausea and vomiting at some time in the history of the headache; two have an aura consisting of a state of marked depression, and one can tell the imminence of an attack by an increase in appetite.

Simple Headache Group: The remaining six of the total of forty-two cases that we are reporting are definitely not migrainous in type, although careful study reveals no local condition that might account for the presence of head pain. We have purposely not confined our study to migraine alone. We shall refer to these patients as the simple headache group.

We are interested in a study of the therapeutic agent, not the clinical entity, and we also feel that a comparison of the responses of various types of headache may indicate whether they are distinct entities or are due to similar metabolic disturbances.

The incidence of other diseases in these patients is of interest. Of those classified as *migraine,* hay fever was present in two, multiple sclerosis in two, urticaria in two, asthma in one, colitis in one, and one suffered from gastrointestinal disturbance unless on a low protein diet. In the *migrainoid* series, urticaria was present in one, heart disease in one, and ulcer in two. Among the cases of *simple headache,* ulcer was present in three, and in one the liver was found to be two fingers below the costal margin although liver function tests were negative. No correlation was observed between the incidence of these conditions and the response of the patients to therapy.

The patients were treated by the oral administration of chondroitin sulphuric acid. The material used was either prepared by us or supplied to us by the Wilson Laboratories or by Chappel Brothers, Inc. The greater part

TABLE 2. CASES OF MIGRANOID HEADACHE

Case	Sex	Present Age	Age at Onset	Months on Treatment	Days Between Attacks		Severity of Attacks		Recurrence without Chondroitin
					Before Treatment	During Treatment	Before Treatment	During Treatment	
2	Female	39	9	4	3–7	3–10	Sev.-Mod.	Sev.-Mod.	
14	Female	34	20	7	14	21–30	Severe	Sl.-Mod.	Yes
16	Female	42	27	6	7	21	Severe	Sl.-Mod.	Yes
20	Female	43	21	3	4–8	4–10	Severe	Severe	
21	Female	29	18	3	14–28	None	Moderate		Yes
23	Female	35	7	7	3–7	Rare	Moderate		Yes
24	Female	47	40	12	7	None	Moderate		Yes
25	Male	57	7	2	1	1	Moderate	Moderate	
43	Female	27	14	3	1	1–4	Moderate	Slight	
52	Male	28	24	2	10	10	Moderate	Moderate	

of the study was made while using a product that contained less than 5 per cent. of impurity; more recently we have employed various preparations containing between 10 and 40 per cent. of impurity in an effort to find a preparation that would be less expensive if manufactured on a commercial scale. The percentage of impurity was calculated from determinations of the glucuronic acid content of the material by the method of Lefevre and Tollens as modified by Dickson, Otterson and Link.[2] We wish to acknowledge our indebtedness to Mr. L. G. Lederer of the Department of Physiology, Northwestern University Medical School, for determining the glucuronic acid content of each batch of chondroitin that we employed. Occasional determinations of total nitrogen, total ash, and total sulphate have served as a check on the purity of the preparations. In the cruder material that we have employed recently, the chief impurity has been protein. The source of the chondroitin has been cartilage from beef or horse.

In most cases we have administered 3 grams of chondroitin per day, either in the form of the powder or in capsules. Occasionally the dose has been increased to determine whether a response could be obtained in cases not benefited by the above dosage, or decreased to observe the lowest limit necessary to maintain the patient headache-free. The optimum dosage has appeared to be three grams per day; only rarely has benefit resulted from larger doses. The response appears to be equally satisfactory whether the substance is given three times daily in divided doses or as the whole amount once daily. The administration has been constant throughout the period of treatment, except when chondroitin was discontinued or a placebo substituted to determine whether the headaches would recur. The patients were instructed not to make alterations in diet or mode of life, and no other medication was permitted with the exception of analgesics for the relief of acute pain. If no benefit resulted, we endeavored to keep the patient under treatment for at least two months, although in cases where the headache was frequent, a shorter time seemed adequate for the demonstration of ineffectiveness. All the cases have cooperated by remaining on treatment for a satisfactory period.

TABLE 3. CASES OF SIMPLE HEADACHE

Case	Sex	Present Age	Age at Onset	Months on Treatment	Days Between Attacks		Severity of Attacks		Recurrence without Chondroitin
					Before Treatment	During Treatment	Before Treatment	During Treatment	
25	Male	36	27	5	7	None	Slight		Yes
26	Male	45	16	3	1	None	Sl.-Mod.		Yes
28	Male	42	41½	3	1–4	None	Slight		
29	Female	14	8	8	3–7	None	Moderate		Yes
30	Male	49	44	4	1	1–2	Moderate	Slight	Yes
32	Female	38	36	2	3–14	Rare	Moderate	Sl.-Mod.	

Results. The results are given in the accompanying tables. Certain additional points should be noted. Chondroitin has a tendency to produce a softening of the stools which in most cases does not amount to an actual laxative effect; this has been noted in more than 50 per cent. of the cases but cannot be correlated with the response of the headache, since it appears as frequently in those who receive no benefit as in those that are relieved. In one case constipation followed the administration of chondroitin; this patient was completely relieved of headache. Three patients reported a definite catharsis which in one case prevented further treatment. The effect on the bowel tends to become less marked on continued administration. No untoward effects have been noted in the patients or in normal individuals who have taken large doses of the material.

As a rule, no effect on the headache is observed within the first three to ten days. A number of patients have had headaches within the first week after the institution of therapy, and have then been headache-free as long as medication was continued. We believe that it is difficult to be sure of benefit when the reduction in frequency or severity of the headache is less than 50 per cent. We have therefore regarded any change amounting to less than 50 per cent. reduction in frequency or marked decrease in severity as no improvement. When the patient appears more than 50 per cent. relieved but still has periodic headaches that are sufficiently marked to be disturbing or to interfere with ordinary activity, we have classified him as partially relieved. Marked relief indicates that the patient is either free from headaches, that they have become very rare, or that they are very slight. The severity of a headache is difficult to judge. Headaches which force the patient to remain at complete rest, have been termed severe; those that do not require complete rest but which distinctly interfere with ordinary activity have been termed moderate. We have referred to those headaches which permit the patient to continue his daily routine with no marked impairment of mental ability as slight.

Many patients spontaneously report that they experience a sense of well being while taking chondroitin. This may be due to the absence of headache, but is difficult to explain on that basis since it is constantly present. It was most marked in Case 11 whose headaches increased in severity as she approached the menopause, and who became mentally depressed to the point of contemplating suicide. Any worry or excitement precipitated an attack. During the first month on chondroitin the mental condition was much improved, and the patient experienced but one attack of migraine which followed the death of her husband. She has had no further headache while on therapy, and has gained twenty-four pounds in weight. It is not uncommon for the underweight cases to gain while on treatment; nine such patients have gained an average of six pounds, although three others who were definitely underweight have failed to gain.

Since glucuronic acid is one of the major constituents of chondroitin, and because glucuronic acid is known to be used by the body for the detoxification of a large variety of substances,[3] it seemed desirable to test the action of other compounds containing this substance. Glucuronic acid itself is not available in quantities adequate for clinical use. Accordingly, twenty patients were placed on the calcium salt of galacto-glucuronic acid which was prepared for us by the courtesy of the Abbott Laboratories. This material contains 46 per cent. of glucuronic acid, and the dosage was calculated so that an amount of glucuronic acid equal to that in three grams of chondroitin was administered daily. In some cases, new patients were started on this material, in other instances, patients already on chondroitin were changed to galacto-glucuronic acid without being informed of the substitution. In only one case did this sub-

TABLE 4. SUMMARY OF RESULTS

	Number of Cases	Percentage Not Relieved	Percentage Partially Relieved	Percentage Markedly Relieved
Migraine	25	16	28	56
Migranoid	10	30	40	30
Simple Headache	6	0	33.3	66.6

stance have an effect comparable to that of chondroitin; this one patient with typical migraine has never received chondroitin and has now been free from headache for two months while on the galacto-glucuronic acid. His headaches formerly occurred every seven to fourteen days. In the remaining nineteen cases, the galacto-glucuronic acid seemed to be of benefit in some, but in no case did its effectiveness compare with that of chondroitin even when the dosage was considerably increased.

More than thirty patients now being studied are not included in the present series because they have been under observation for too short a period. It should be stated that our results on this additional number thus far confirm those reported above.

Discussion. We believe that this series of cases, although small, warrants the tentative conclusion that chondroitin sulphuric acid is of definite benefit in more than half of the cases of idiopathic headache including migraine. A number of the patients report that it has induced a sense of well-being greater than that formerly experienced in the interval between attacks, and weight gains have been noted in underweight patients following its administration. Its action is slow, requiring several days of administration before a definite effect is produced, and it appears that the headaches recur when administration is discontinued. An exception to this latter statement was noted in one case of migraine where the patient was approaching the menopause, and where it was eventually possible to discontinue chondroitin after ten months of treatment without recurrence of headache except in very mild form when they had previously been exceptionally severe. In two patients with simple headache it has also been possible to discontinue treatment after several months at a time when the patients had gained weight and appeared to be improved in general condition; in one of these cases the headaches recurred in a mild form two months after stopping treatment, the other has been free for two and one-half months without therapy. With these exceptions, however, interruption of the medication has always been followed by a recurrence of the attacks.

It has become evident that even in those cases where chondroitin is most effective, it still does not confer complete immunity from headache. A patient who does well when this substance is administered and is for the most part free from symptoms may have an attack following a severe psychic disturbance, although the severity of the attack is often less than would be expected. One gains the impression that the tolerance of the body may be raised toward whatever metabolic fault is responsible for the headache.

We have been unable to determine any factors which might differentiate those who are benefited by chondroitin from those who remain unrelieved. The severity of the headache is no criterion of whether or not relief will be obtained. Nor have we found any correlation between the character of the attack and the extent of relief. The same is true of the frequency of the attacks and the number of years that they have been present. These facts are well illustrated by the accompanying tables.

Of major interest is the mechanism by which chondroitin exerts its effect. Thus far there is little evidence available on this point. The slightly laxative effect sometimes noted during the administration of the substance is probably not responsible for its action since a number of the patients who were most improved had not been similarly benefited by treatment with cathartics, and the softening of the stool was noted as frequently in patients who were unimproved. A study of the bacterial flora of the intestine during the administration of chondroitin has been made by Mr. L. G. Lederer and one of us (L.A.C.) (unpublished), because a change in the bacterial flora might account for the results; no perceptible change in intestinal flora was observed.

Chondroitin consists of two molecules of glucuronic acid, two of acetylated galactosamine and two sulphate radicals. It has long been known that the body, probably the liver, detoxifies certain substances by combining them with glucuronic acid, although it is still a question whether the glucuronic acid is formed in the body or obtained from the food. Except for this fact, our knowledge of the physiological importance of these compounds is extremely meager. We have previously noted[4] that the daily administration of chondroitin appears to improve the condition of Eck fistula dogs in which there is an hepatic

insufficiency. Further studies, as yet unpublished, indicate that it is of benefit also in other types of experimental liver injury, notably ligation of the common bile duct and biliary fistula. The fact that some investigators have reported disturbance of liver function in migraine is suggestive. The relative inefficiency of galacto-glucuronic acid in the treatment of idiopathic headache might suggest that the glucuronic acid fraction of the chondroitin molecule is not responsible for its effect. However, such a conclusion is not warranted at the present time. The chemistry of these compounds is not sufficiently well known to permit one to feel sure that the uronic acids present in the two substances are identical. An attempt to determine the role of the uronic acids and the amino sugars in metabolism by means of animal experimentation is in progress, and it is hoped that this may throw some light upon the problem.

SUMMARY

Chondroitin sulphuric acid has been administered to forty-two patients with idiopathic headache. More than 50 per cent. have been markedly benefited, and another 30 per cent. appear to be partially relieved. The cases are classified as migraine, migranoid, or simple headache; the criteria for these classifications are discussed. The percentage improvement in the three groups is similar. The period of treatment has varied from two to twelve months. As a rule, continued administration is necessary to maintain improvement.

It is with pleasure that we express our appreciation of the courtesies of Drs. Atkinson, Elliott, Fogelson, Nadler, MacKechnie, Marquardt, Snorf, and Starr, who have allowed us to use their records or have referred cases to us.

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DISCUSSION

Dr. Lowell D. Snorf, Chicago: Dr. Crandall's paper is of striking interest. First because he calls attention to a new form of therapy which we believe has a very potential value and secondly because of the speculative interest he arouses in the possible underlying disturbances in metabolism.

One should have in mind a working classification of headache and grouping on an etiological basis. Headaches due to intracranial or meningeal disorders, uremia and syphilis must be carefully excluded. Then follow the groups due to fatigue, muscular tension, induration of voluntary muscles, constipation, chronic intoxication from metallic poisoning, eye strain, sinus infections and those associated with menstruation and finally those due to migraine. The differential diagnosis will at times not be made without meticulous care in history taking and physical examination. The attendant symptoms of migraine—vomiting, hemianopsia and hemicrania,—its hereditary nature and its occurrence in childhood or adolescence makes its recognition comparatively easy. There might be added a migrainoid group not typical of migraine which has a tendency to periodicity and one or more of the symptoms so characteristic of true migraine. Actually they may be of the same disease entity if we can dignify migraine as such.

Migraine is thought to be due to food idiosyncrasies, to a disturbance affecting the pituitary gland through imbalances of the endocrinopathic constitution and to vaso-motor disorders. Allergic phenomenia cannot explain a large per cent. of migraine.

Any new therapeutic measure recommended for the treatment of migraine must be looked upon with a certain measure of doubt and question. It has been said that the number of medications employed in migraine over the years is almost as numerous as the drugs of the pharmacopoeia and their efficacy is in inverse proportion to the number.

Nevertheless we have seen many of these patients obtain relief most striking. Perhaps some of you in this audience are victims of these agonizing headaches and can fully appreciate the enthusiasm with which this management has been received by those who have for the first time actually had relief of headaches. It is true that many patients who after obtaining the services of a new doctor are relieved of migraine for a period of weeks or months and then their headaches return. I dare say that the psychic element is a big factor. We have attempted, however, as far as possible to give the medication to the patients with a minimum of suggestive therapy. And, furthermore, the figures that Dr. Crandall has presented to you have in no sense been changed by his enthusiasm. Our patients have had no real alteration in diet. In fact no attempt was made to change the routine of rest, work or food.

In analyzing the figures in Dr. Crandall's paper we find a fairly sizable number of those in the migraine and the migrainoid group who did not obtain relief. Does this mean that the classification is wrong, that the drug is expected to fail in a certain per cent. of cases or that the dosage was inadequate?

Any grouping is going to be very unsatisfactory where the etiological factors are so poorly understood. If we could determine in any given individual that the underlying difficulty was related to an allergic reaction, to a vasomotor imbalance or to an intoxication of metabolic origin, our problem would be simplified. Is it fair therefore to assume that those patients showing positive response to chondroitin have some metabolic dysfunc-

tion which precipitates the hair-trigger mechanism? The observations and studies have not been carried out long enough to warrant more than a speculation. To my knowledge no one has studied the effect of glucoronic acid compounds on any series of patients as these presented to you today.

The striking results observed in seventy per cent. of the patients both in decrease in frequency and severity of the headache and especially the marked improvement in the sense of well-being, lends an assurance to the belief that the glucoronic acid group favorably influences the detoxifying mechanism of the liver. That this mechanism is often at fault is reasonably tenable.

Whether chondroitin will prove a real asset in the therapy of migraine must remain an open question until continued impartial observation gives us the answer.

INTRACAPSULAR CATARACT EXTRACTION BY THE "VACUUM CUP METHOD" —PRELIMINARY REPORT OF FOURTEEN CASES*

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For many years I had been doing cataract extraction by the capsulotomy method, but became dissatisfied with it after Colonel Smith came to Chicago to demonstrate his Smith Indian intracapsular operation, and have been striving to find some method to do a more satisfactory operation. This led me to devise my head rest and lid-hooks which gave me better control of the lids.[1] Having obtained this I then attempted intracapsular extractions; by fracturing the zonule with a curved spatula and tilting the lower margin of the lens upward, by pressure with the fixing forceps, I extracted the lens in capsule by the aid of a double lens hook. This was later modified by using a lens hook aided by a spud, worked mechanically through the handle of the instrument. These proved too hazardous, as it was impossible to avoid the loss of some vitreous, and I abandoned them.

Some time after this, while at the Mayo Clinic I saw Benedict using the Kalt forceps which I then began to experiment with, attaining some success. I was not satisfied with my results, however, but continued to use them periodically. I also used the modified Smith operation by fracturing the zonule with the tendon hook, but did not tumble the lens. In some of these a part of the capsule remained, requiring a needling. I saw Woodruff, Fisher, Nugent, Castroviejo, using the Barraquer suction method, but I never attempted it.

In 1923, in giving the history of intracapsular cataract extraction, Colonel Smith[2] makes the following comment of the Barraquer suction operation:

"*Theoretically,* the suction operation seems to be an ideal means of intracapsular extraction of cataract.

"*Practically,* the apparatus *often fails at the critical moment.* The vacuum may be broken just as the lens begins to engage the corneal incision, and the *delivery must be made by another method.* In the hands of Barraquer the operation is a great success; in the hands of others, the method may often be unreliable."

Continuing, Smith says: "The suction method of intracapsular extraction is yet in its infancy. Possibly in the near future, such improvements may be made in the erisiphako that it will be possible for many surgeons to use it."

Wolfe,[3] who uses and praises the instrument, states that—"When the proper amount of *expression* and *lift* are combined the lens will *usually* appear, upper border first, and then be lifted out by the canula *without further counter pressure.*" He further states that—"Occasionally the *additional lift* with less *expression, causes* the *erisiphako* to *lose* its *hold on* the *capsule before delivery is complete*" and,



Fig. 1. (Crossley). Showing lens, after its removal, held firmly by the Vacuum Cup. (X8.)†

"If so the first assistant has a Fisher needle ready and *assists the lens through the wound.*"

In 1910 Dr. Vard Hulen of San Francisco,

*Read before the Section on Eye, Ear, Nose and Throat of the Illinois State Medical Society, Springfield, May 1932.

†Illustrations enlarged from 15 m. m. moving picture film.

Cal., adapted the principle of fixing the lens with a small vacuum cup and lifting the cataract out of the eye. He reported six successful cases. I obtained my idea for making the "vacuum cup" I am using partly from a relic once used by Dr. Guril of Cuba. The fourteen cases of intracapsular extraction I am reporting were done by this "vacuum cup." Owing to the great difference in its construction and its efficiency in holding the lens, I have chosen to designate it as the "Vacuum Cup Method" in contra-distinction to that of the "suction method" of Barraquer and others.

In *none of these cases* have I found *it necessary* or *desirable* to *aid the vacuum cup* by *expression* in the delivery of the lens. The *holding* or *lifting power* of the *"vacuum cup"* that I am using is much greater than any of the Barraquer instruments I have seen. The vacuum cup has *never let loose from the lens* in any of the cases I have operated on, neither have any capsules been ruptured. I have operated on these cases without any previous experience with this type of instrument.

In two of the cases vitreous showed, and in two a few drops only escaped. In all four the incidents were due to faulty technique (in handling the lid hooks).

I have selected my cases as to age, above 60, with two exceptions (43+ and 54), staying within the recognized field in this respect in intracapsular work. I have avoided the very hypermature cases. I hope to widen the field of usefulness of this method as I acquire more experience.

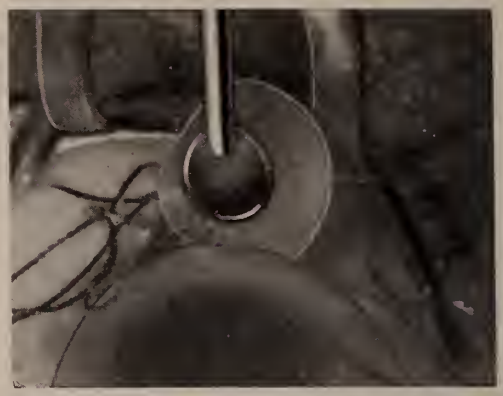


Fig. 2 (Crossley). Showing the *unaided delivery* of the lens through the corneal section by the Vacuum Cup. (X4.)

Owing to modifications in the instrument and the frequent changes in technique, I am deferring showing the principles and details of its construction and use until these are more definitely established. When I have acquired a larger series of cases I will give the complete details.

DISCUSSION

Dr. Harry Woodruff, Joliet: I have been very much interested in seeing Dr. Crossley work and also in his pictures. I am glad some one at the Infirmary is doing some form of intracapsular operation. It is most startling

Case No.	Age	Eye	Correction	Vision	Post Operative Findings	Extraction
1. W.S.	71	L.E.	+10.00 +1.50 ×180	=20/50+	Few drops of vitreous escaped. Improper handling of lid hooks. (Iris synechia present.)	Combined
# 2. J.D.	74	L.E.	+10.50 sphere	=20/20 +2	Hyaloid membrane intact	Combined
3. W.J.	67	R.E.	+10.00 +1.50 ×130	=20/30	Hyaloid membrane intact	Combined
# 4. J.M.	62	L.E.	+ 9.00 +1.50 ×180	=20/50	Sclerotic Fundus. Hyaloid membrane intact	Combined
# 5. R.R.	77	L.E.	+ 6.00 +3.50 ×15	=20/40 +3	Hyaloid membrane intact	Combined
# 6. W.C.	63	L.E.	+ 8.00 +1.50 ×30	=20/40	Hyaloid membrane intact on nasal side. Small hole in temporal side. No vitreous showed at operation	Combined
7. M.J.	66	L.E.	+ 6.00 +3.00 ×165	=20/40	Hyaloid membrane intact	Combined
# 8. F.S.	78	R.E.	+ 8.00 +4.50x15	=20/30	Hyaloid membrane intact	Combined
9. J.C.	74	L.E.	+ 9.50 +2.50 ×165	=20/20	No slitlamp examination. Slightly drawn pupil	Simple
#10. M.F.	54	R.E.	+ 9.50 +3.50 ×30	=20/40	Hyaloid membrane intact. Fluid vitreous	Simple
11. M.M.	..	....	Deceased		No vitreous presented. Wound healed perfectly. Died in diabetic coma	Combined
12. F.C.	63	R.E.	+2.00 +.75 ×150	=20/30+4	Broke hyaloid membrane with spatula while replacing iris. Vitreous showed. No loss	Combined Peripheral Iridectomy
13. M.J.	43+	R.E.	+10.00 sphere	=20/30 +1	Few drops of vitreous escaped	Combined
14. G.W.	63	L.E.	+10.00 sphere	=20/25	Hyaloid membrane intact	Combined

#These cases were examined with slitlamp.

to see the amount of manipulation used in order to dislocate the lens, and yet no vitreous escapes. In Barraquer's original method which I followed he does no manipulating of the lens in order to dislocate it. He simply tumbles it. That is, he delivers the inferior border first.

The thing that really makes the various methods of intracapsular surgery safe, is the improvement in our anesthesia. The paralysis of the orbicularis muscle: There is some objection to the orbital injection. I saw the late Dr. Derby puncture a vessel and of necessity postpone the operation on account of the swelling and proptosis following the hemorrhage. For this reason Dr. Veerhoff objects to the orbital injection. The use of the suture prevents the eversion of the cornea. I think one suture is enough if properly placed.

Dr. Richard J. Tivnen, Chicago: I have nothing to say more than to compliment Dr. Crossley on his wonderful picture. It is very interesting to note that eye operations can be brought to our attention in this very satisfactory way. I have had some experience with this machine in the last few years, but recently they have advanced so wonderfully, with new lighting and films, that we have a very wonderful adjunct to our methods of instruction in operations. I was much impressed with the movement of the eye with the instrument, particularly the rotation and the character of the movement when he was rupturing the zonule. I have seen Dr. Crossley operate, and I believe this movement is accentuated in the photograph. I do not believe there is as much movement in the actual operation as one would gather from the picture.

Dr. H. L. Ford, Champaign: In regard to the lighting, I should like to ask what strength lights were used, what camera, and whether a telescope head was used for part of the magnification.

A Bell & Howell Camera was used. 400 C. P. light with approximately 1000 C. P. in auxiliary lights was used. The closeup was made by a telescope of lenses to produce the magnification.

Dr. E. R. Crossley, Chicago (closing): Dr. Tivnen is perfectly correct about the high magnification causing the movements in the fracturing of the zonule to appear somewhat violent, but such is not the case. The motion I use is very delicate as compared with what you see. I move it on a plane, forward, backward and laterally very gently, and when I feel it is loose I lift just enough to see the iris move. By lifting slightly and drawing on it, the cataract will present through the trough formed by the iridectomy and the pupillary space having been freed from its attachments. I would not attempt this unless it was freely movable. I now use the full iridectomy in most cases.

As to the zonular fibers becoming broken during the incision, I will have to differ with Dr. Suker. I believe if the knife is sharp, it is quite unnecessary to rupture the zonule in making the corneal section.

Dr. Woodruff spoke of tumbling the lens. I do not use it in my method for I feel it is *too violent* for safety. I am trying to do a *perfect intracapsular* extraction *without fracturing* the *hyaloid membrane* and this I have accomplished in a large percentage of my cases. I use the O'Brien method of blocking the lids. It is very essential for the success of the operation. I do not now use the intraorbital injection. I have simplified my technic, as shown in this picture. I am now using one suture only, placed before the incision, which simplifies the operation very much. The changes will be shown in moving picture when I make my next report and describe the instrument and technic of the operation in detail.

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PRE-EXISTING DISEASES, INDEPENDENT OF THE EMPLOYMENT VERSUS INDUSTRIAL ACCIDENTS*

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Van Gorder v. Packard Motor Car Co.[1] was a case of appeal before the Supreme Court of Michigan. The findings of the Industrial Accident Board were as follows: "On the 27th May, 1915, Frank Van Gorder entered the employ of the Packard Motorcar Company as a steam fitter and plumber (Stip. R. p. 25). Frank Van Gorder was standing upon a scaffold about six feet in height engaged in his work as steam fitter. He gave some orders to his helper, and a little later fell from the platform to the floor, and his skull was fractured by the fall. The fall and concussion caused his death about 24 hours later. The evidence as to the cause of the fall is very meager, being to a large extent opinion evidence. There is opinion evidence that it was an epileptic fit, dizziness, or a fainting spell. On the whole the weight of the evidence tends to show that epilepsy was the cause of the fall, and the board so finds the proximate cause of death was the concussion and fracture of the skull caused by the fall. This resulted because of the place where Van Gorder was working, viz., on a scaffold some distance above the floor. Injury by falling from the scaffold was one of the dangers incident to the employment, and the fall from the scaffold caused the death."

The Industrial Accident Board granted an award in favor of the widow of the deceased employee, and the employer appealed to the Supreme Court. In discussing the case the

*A medico-legal analysis of some evidentiary facts of record tending to prove or to negative causal connection between employment and injuries under workmen's compensation acts.

Supreme Court said: "We therefore have before us the case of a servant whose fall was brought about by no strain, excitement, or overexertion, no overheated or unhealthy condition of the place of employment bringing on a temporary faintness, no misstep due to contributory negligence, no unsafe place in which to work, no negligence of a fellow servant, but a fall due to an epileptic fit and a resultant fracture of the skull, producing death.

"We cannot agree with the board that the 'proximate cause' of the death, as a test of negligence or responsibility and as that term is understood in law, was the concussion and fracture of the skull. To so hold would be practically to announce the doctrine that the injury was its proximate cause.

"In the instant case the deceased was performing the ordinary duties of his trade, that of a plumber and steam fitter. He was standing on a scaffold a few feet from the floor. There is no claim that the scaffold was improperly constructed or in any way unsuitable for the service. Due to no conditions arising out of the employment, but solely to his predisposition to epilepsy, of which the employer had no notice, he fell from the scaffold receiving the injury from which death resulted. The fall was caused and caused only by the epileptic fit. The fit was the direct and only cause of his injury. We do not think it would be seriously contended that had he fallen in an epileptic fit while standing on the floor and received the injury he did that the injury arose out of the employment, and that the defendant was liable. Collins v. Brooklyn Gas Co., 171 App. Div. 381, 156 N. Y. Supp. 957. The height from which he fell, here only a short distance, could not change the liability for the injury. The most that can be said is that the height from which deceased fell may have aggravated the extent of the injury. A person falling a greater distance may be more seriously injured than one falling a lesser distance; but it does not change the question of responsibility, of liability. The distance of the fall might contribute to the extent of the injury, but it was not a contributory cause to the fall. When the deceased was seized with the epileptic fit, he would have fallen, no matter where he was, and the employer cannot be held responsible because that unfortunate seizure occurred when the workman was on a scaffold a few feet from the floor. . . We are therefore constrained to reverse the case."

While we shall come back later to a somewhat fuller discussion of the Van Gorder case, suffice it to say at present that there are two fundamental principles of workmen's compensation law which are controlling; namely: that the culmination of a pre-existing disease independent of the employment does not entitle the injured workman, or his dependents, to compensation even though the disease climaxed during the course of his employment, and, on the other hand, that a pre-existing disease in an employee is not sufficient per se to exclude compensation as long as there is an injury arising out of the employment and during the course thereof. It is the proper application of either of the two principles which is often extremely difficult, and this paper is, therefore, devoted to the comment upon certain cases in which the issue of "Culmination of a Pre-existing Disease, Independent of the Employment vs. Injury Arising out of the Employment and during the Course thereof" has been misinterpreted by either attorneys or medical experts.

Nature and Character of the Alleged Pre-existing Disease. There are certain diseases which cannot be aggravated, superinduced, or caused by an industrial accident. Thus, where an employee sustained a fracture of his right tibia, and, while disabled, was committed to a hospital for the insane, the industrial accident commission found after extended testimony that dementia praecox is a type of insanity which trauma cannot enter into either as a direct cause or as a precipitant. It was held that the applicant was entitled to compensation solely for the disability incident to the fracture.[2] Dementia praecox or adolescent insanity is "a group of morbid symptoms occurring at about the period of sexual development with, in general, a somewhat characteristic affective type, tending to ultimate dementia with more or less rapid course."[3] Kraepelin compares it with a tree that had sufficient soil for its growth to a certain point, and that when this is exhausted, it fails. The comparison is not an inapt one, and assists in the comprehension of the actual state of the cause of this disorder.[4] Also, there is not sufficient

medical evidence to connect industrial hazards with a disease called encephalitis lethargica or "sleeping sickness" to warrant the conclusion that its inception could be traced to any traumatic injury due to the employment.[5]

There are other diseases which may, or may not, be the result of an industrial accident or of the culmination of a pre-existing disease, independent of the employment. "It is not permissible for the commissioner to guess in this connection. The danger of guessing is illustrated perhaps by headache cases better than by others. Headaches come from a multitude of causes, and it may be the barest coincidence that there has been an injury."[6] But where, on the other hand, a workman was compelled to exert himself by lifting heavy weights,[4] complained of headaches to the foreman, and medical evidence existed tending to prove the fact that the headaches had been produced by the strain, there was a compensable injury.[6a]

Other diseases are prima facie the results of industrial accidents. Such are the well-known strains, sprains, fractures and so on.

Other circumstances may be helpful. Age and sex of the claimant should be taken into consideration. Where, according to the age of the claimant, it is unusual for a person of his years to have the alleged pre-existing ailment, the inference is against the climaxing of such a disease independently of the employment.[7] The general denial of the employer, or of his insurance carrier, based upon allegations of the culmination of such a pre-existing disease, may leave him, or them, for all practical purposes without any defense at all. Thus, it would be rather uncommon to find brittle arteries, high-blood pressure, and general arteriosclerosis in a person of, we say, 20 years of age.

Valuable clues may be had sometimes from an examination of the characteristics of the course of the alleged pre-existing disease. Where from the time of the very beginning of an alleged pre-existing disease (incubation period, for instance), or any other phase thereof, there is, according to medical science pertaining to such a disease, a reasonably definite and certain period of time of non-manifestation of symptoms before such disease breaks out perceptibly to the senses of the patient, or of observers of such a person, and where, further, the point of termination of such a period of non-manifestation reasonably coincides with an alleged industrial accident, or its reasonably immediate after-effects, there is ground to assume that the alleged pre-existing disease in question may have culminated independently of the employment, though during the course thereof, and that there was no industrial accident in fact, unless there are other facts negativing such an assumption. Spring Valley Coal Co. v. Industrial Commission et al.[8] is a good illustration. Peter Sabatini, employed by the plaintiff in error, had been struck in his eye by a piece of rock or coal while working in the company's mine. About three months after the accident he applied for compensation under the Workmen's Compensation Act of Illinois. After a hearing an award was made in favor of the employee, from which the employer appealed. The only controversy was concerning the amount of compensation. The record showed that Sabatini had never had any trouble with the eye before the accident, that after the accident it became inflamed and that, when he went to an eye specialist, he could not see because he could not keep his eye open, that while he was being treated the eye became better, that he could see a little bit, and afterwards could see nothing. The eye-specialist testified that when Sabatini came to him that the patient was suffering from an infected ulcer of the cornea, caused by the piece of coal or rock mentioned, that the foreign body caused the infection, that there was no perforation, and that after having treated the ulcer antiseptically it had healed up, leaving a scar which caused 35 per cent of loss of vision because of opacity over the pupil. This doctor had examined Sabatini's eye before he had discharged him and had found a chorioditis which, in his opinion, had nothing to do with the injury. Sabatini, according to the doctor's testimony, would have gone blind anyway in the same length of time as he has been treated, and that there was no connection between the injury and the chorioditis. Another eye-specialist testified in substantially the same manner adding that chorioditis is a progressive disease, acute, subacute and chronic in its character, and that loss of vision may become complete within two weeks. "Sabatini's testimony that he had never any trouble with

the eye before the accident,'' said the Supreme Court of Illinois, ''must be accepted as true, in the sense that he never knew that there was anything wrong with it. Although the eye may not have been perfect, if he always had normal use of it, and the sight was lost as a result of the accident, he would be entitled to full compensation. Mark Mfg. Co. v. Industrial Com'n. 286 Ill. 620, 120 N. E. 84. If on the other hand he had a pre-existing disease, known as chorioditis, which was progressive, and from which blindness was certain to ensue, and the accident caused only a partial loss of vision, the statute provides a different measure of compensation. There was no contradiction of the testimony that he had chorioditis, which would cause blindness, and that the superficial scar resulting from the accident could not cause blindness, but only partial loss of vision, due to the interference of the scar. In the present state of the record it must be held that the total loss of vision was not due to the accident. There is no evidence whether chorioditis is of such a nature that Sabatini would have been aware of its existence up to the time of the accident, if he had it. For aught that appears, he may have been afflicted by the disease, which would soon cause total blindness, and yet never have had any trouble with the eye. If a further hearing should be had, the evidence may justify a different conclusion; but the evidence which was had does not sustain the award for permanent total loss of the eye as a result of the accident ''..... Reversed with directions etc.

Here, there was a phase of an alleged pre-existing disease which was non-manifest, to wit, the phase immediately preceding the manifestation of total blindness. The medical experts were able to give a reasonably certain and definite time within which blindness would become manifest. The period of non-manifestation coincided in its termination with the reasonably immediate after-effects of the actual industrial accident which accompanied the culmination of the pre-existing disease. Therefore, the court adopted the view that there had been a coinciding culmination of a pre-existing disease, independent of the employment. Had the medical experts testified that there was no such reasonably definite time of termination of the period of non-manifestation, their testimony when given as in the above case, would have been mere conjecture, surmise and speculation. Had the period of non-manifestation of the chorioditis been given as much longer than the time about which the injury to the cornea occurred and its immediate after-effects lasted, no doubt, the Commission would have been justified in concluding that the corneal ulcer had hastened the total blindness. However, not all courts will favor equally the theory of what we might call the existence of a ''symptomless'' disease. In Womack v. New Orleans Public Service, Inc.,[9] the Louisiana Court of Appeals has to say: ''We are gradually becoming accustomed to the originally startling dogma of our brethren of the pill and scalpel to the effect that there often lurks in the human system a source of evil, inert, inactive, dormant, and in the quiescent state, like the crouching jaguar, innocuous to our physical welfare—but when aroused to action by a trauma or shock, or other abnormal incident, a veritable juggernaut, crushing in its path all the vital forces of the body and causing disease, disaster and death. These evil forces, we are told, usually hide behind our teeth and tonsils where from day to day they 'ripe and ripe.' We understand this theory is now orthodox, and we humbly make our confession of faith, but we venture the assertion that its progress in medical science is strewn with many innocent teeth and tonsils, the erstwhile property of our fellow citizens, as vicarious sacrifice upon the altar of medical science.''

WHEN A PRE-EXISTING DISEASE IS TO BE ADMITTED BY A CLAIMANT

Where a pre-existing disease is to be admitted to exist, nevertheless, the contention that the disease culminated independently of the employment still remains to be proved. The presence of such a pre-existing ailment is not of and in itself sufficient ground to warrant a denial of compensation where it can be shown that the disease did not interfere with the employee's work or had not destroyed partially or totally his earning capacity, as the case may be, and where, in addition, it can be proved that the industrial accident, if any there was, could have been a proximate cause of the employee's ensuing partial or total dis-

ability. Thus, in Centralia Coal Co. v. Industrial Commission et al.[10] the defendant in error, John Gutzler, was injured while loading a car, while employed in the company's mine. Gutzler was lying on his side when a rock fell from the roof of the room in which he was working, and struck his hip, crushing the bones of the hips together. It further appears from the record that he had been from that time on unable to work, that he tried to do little things, that he could not stoop down without pain, and that when he attempted to so do there was something too short to allow him to stoop down. He characterized his pain when sitting down as "something sticking in him," that at times it hurt all along the stomach and bowels. There was also testimony that he suffered from a catarrh of the bladder, that he had had this disease for about 20 years, but that it had not kept him from working except when he was operated on for stones in his bladder, about a year and three-quarters ago. Two physicians were called in his behalf who testified that claimant had been operated on for stones of the bladder and for an abcess of the appendix, that X-ray pictures showed a mass on the side of the bladder which was thought to be a stone, and that the injury would aggravate the condition.

"The evidence in this record shows," said the Supreme Court of Illinois, "that Gutzler earned $1400 per year as a loader, but owing to the pre-existing disease, he could not load as many cars as a strong man. His earning power was depreciated by the disease, but was not destroyed. The award in this case was based upon that depreciated earning capacity. .... The award in this case is sustained by the record."

Compensation, further, has been awarded in a case in which a pre-existing disease could not have reached its climax independently of the employment because of treatments administered which brought the employee out of the zone of danger of the culmination of the pre-existing disease.

It is as though the conditions surrounding the employment are running a race with those of the ailment in its endphase. But, to use the same figure of speech, would any spectator of such a race think that the horse which is restrained in its free motion will win the contest? In Blair v. Village of Coleraine,[11] realtor, 62 years of age, had been a volunteer fireman in the Coleraine, Minnesota, fire department for the last twenty years. During the noon hours of May 9, 1928, he answered a fire alarm, running as rapidly as he could 350 feet to the firehall, mounting on the rear end of the hose truck and riding a distance of less than a block. According to part of his customary duties, upon reaching the proper location, he dropped backward off from the moving truck, holding one end of the hose for the purpose of snubbing it about the hydrant while the moving truck continued to run out the hose. In thus leaving the truck, he misjudged the speed at which he was going and came down to the pavement stiff-legged, receiving a jar and feeling hurt immediately upon striking the pavement. Although he was nauseated and dizzy, he made, with some assistance, the hydrant connection. He was at the fire for about one hour, then returned home, feeling a numbness and weakness so that he had to support himself against the wall in going upstairs to his room. Half an hour later he found that he was paralyzed. He had suffered a paralytic stroke. There were proceedings under the workmen's compensation act, an award was had for the claimant, and the insurance carrier of defendant appealed. There was evidence of record that at the time Blair responded to the fire alarm he had been feeling perfectly well and had never had any such trouble as described or any indication thereof before. About eight months prior to his injury he had been troubled with moderately high-blood pressure of 185. He had been treated therefor occasionally by his family physician during that number of months, and the blood pressure had been greatly reduced. On April 23, about two weeks prior to the fire, it was down to 156, about normal for a man of Blair's age. The Supreme Court affirmed the commission's award in favor of the employee.

How much weight had been given by the Supreme Court to the fact that Blair had been treated by a medical doctor for his high-blood pressure, and that the pre-existing disease had apparently responded to such treatment, is not quite obvious. However, the fact remains that it appeared as evidence of record, and that it is mentioned in the decision of the Supreme

Court. Certainly, stress can be put upon medical treatment prior to an alleged industrial accident only in the case that the same did actually cause some improvement, if such an evidentiary fact is to be used in favor of the injured employee. If the pre-existing disease be such as could not have been reduced in its hazards by treatments, at least temporarily, and if the progress of the disease could not have been stopped a reasonable time prior to the alleged accident, the injured employee could hardly avail himself of such medical treatment as evidence that there had been an industrial accident rather than the culmination of his pre-existing disease, independent of the employment. Length and frequency of treatment, it would seem, are often quite important circumstances to be considered in measuring whether the employee had reached the zone of safety in fact. On the other hand, the mere fact that no medical treatment had been given prior to the alleged industrial accident, and conceding a pre-existing disease to exist, does not necessarily mean that there must have been the culmination of a pre-existing disease independent of the employment. There may have taken place a remission of the disease before and at the time of the employee's calamity, and such a regress of the disease may have been of sufficient magnitude to warrant the conclusion that the ailment had not climaxed independently of the employment.

A somewhat similar thought is expressed in Wilson v. Phoenix Furniture Co.,[12] the Supreme Court of Michigan affirming an award in favor of the claimant by saying: "While plaintiff testifies that at times he has been dizzy and weak, he also testifies that it was nothing to speak of, but slight, and never sufficient to cause him to lose his balance and fall. His fellow workmen and superiors in the plant who saw him daily never noticed any appearance of dizziness or fainting, and never saw him fall before. The fact that he did not recall just how the accident happened is in no way extraordinary, when we contemplate that in the fall he struck his head with sufficient force to inflict a gash in his scalp. He was over 70 years of age, not as nimble as in his younger years, and had had trouble with his limbs and feet a short time before. We are not persuaded that we should say, as a matter of law, that the cause of the accident under the evidence in the case is so conjectural as to require us to set aside the finding and award of the board."

THE CULMINATION OF A PRE-EXISTING DISEASE, INDEPENDENTLY OF THE EMPLOYMENT

A peculiar situation arises when there is the culmination of a pre-existing disease, independent of the employment, but where because of the circumstances surrounding the employment the extent of the injuries is greater than it otherwise would have been. There is no contest as to the fact that the employee became injured primarily by reason of the climaxing pre-existing disease from which he had been suffering at the time of his calamity. The question is: Should the employee be compensated for his injuries caused by the culmination of the pre-existing disease, independent of the employment, and which would not have reached such a magnitude but for the employment? That the calamity occurred during the course of employment is to be conceded. However, did the accident arise out of the employment too? If one analyzes such a case one finds that the whole process consists of four parts:

(a.) The non-industrial vulnerating force per se in form of an inherent pathologic condition which brought on the climax of the disease independently of the employment;

(b.) The extraneous reinforcement of the non-industrial vulnerating force per se, due to the conditions of the employment under which the workman had been working and under which, but unconnected otherwise, the pre-existing disease had its climax;

(c.) The injuries which the employee would have received if there had been no such extraneous reinforcement;

(d.) The additional injuries which the employee received by reason of such an extraneous reinforcement due to the circumstances of the employment.

This problem was under consideration of the Supreme Court of Errors of the State of Connecticut in the case of Gonier v. Chase Companies, Inc.[13] in which the widow of a painter employed by the defendant company had been awarded compensation as a dependent of the deceased employee. There was evidence tending to prove that the deceased had sustained fatal injuries by falling from a staging on which he had been working while in due

course of his employment, and that his fall had been caused solely because of unconsciousness due to an attack of indigestion which he was accustomed to have from time to time. The deceased had known of his ailment and had been warned by one of the physicians he had consulted to quit working as a painter above the ground. The court found that the conditions of the employment contributed to the injury, and it followed an English decision Wicks v. Dowell[14] in which it was held that a fall and not a fit was the proximate cause of an injury sustained by a workman who fell while seized with a fit. American jurisdictions had had an opportunity to adopt this English view, but a majority of them has declined to so do.[15] However, the courts of Illinois have followed the English case without qualification in Peoria Ry. Terminal Co. v. Industrial Board, 279 Ill. 352, 116 N. E. 651 (1917), and, also, in Vulcan Detinning Co. v. Industrial Com. 295, Ill. 141, 128 N. E. 917 (1920).[15] Other courts have restricted this doctrine to cases in which there are perils peculiar to the employment and where the employer has neglected to protect the workman against these dangers. "A distinction is to be made between cases of this character and those where the accident, though partly caused by the idiopathic condition of the employee, is due in part also to overexertion of the employee in performing his work, or to the nature of the work or to appliances furnished to him with which to work, or the lack of proper safeguards against the ordinary dangers of the place of work, the injury being somewhat greater because of the idiopathic condition. In these cases the injury is held to arise out of the employment."[16]

When we come back now to the case we started out with: Van Gorder v. Packard Motorcar Company, and compare it with the Gonier case, we find that there is this difference: the surrounding circumstances are much alike in both cases. However, in the Van Gorder case, the Supreme Court of Michigan emphasized the fact that the employee had entered upon his employment only six hours prior to his calamity,[17] his employer having no notice of the workman's physical condition, while in the Gonier case the employer knew of the workman's ailment.[18] These two facts have not been mentioned before but they are clearly stated in the decisions. Maybe, the Van Gorder decision would have been just the other way but for the lack of knowledge of the employer as to his servant's pre-existing disease and his probability of being hurt while employed in the type of work he did. It remains to be seen how much influence the foreseeability of the calamity by either employer or employee will exert upon the courts and commissions in the future.

The conflict which arises out of the Van Gorder decisions of the commission and its appellate court is due to the fact that the former adopted the minority view while the Supreme Court adhered to that of the majority. However either view seems to be tenable in a reasonable manner.

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DIABETIC OR MYCOTIC VULVOVAGINITIS

H. C. Hesseltine, Chicago (*Journal A. M. A.*, Jan. 21, 1933), points out that diabetic vulvovaginitis is an infection, usually a mycosis, and rarely, if ever, an irritation from products in the urine. Glycosuria supplies an adequate medium for a vulval mycosis. Fungicidal therapy cures "diabetic" pruritus and vulvitis. Synthetic glycosuria does not produce pruritus or vulvitis.

THE NEWER ORGANOTHERAPY IN GYNECOLOGY

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The advancement made during the last decade in the knowledge of the endocrinology of the female, is almost astounding. Recent discoveries have made obsolete many of our ideas concerning the physiology of the female reproductive organs.

The object of this article is not to bring out anything new in this rapidly developing field but to try to summarize and correlate some of the recent magnificent forward strides that have been made, up to the present time. If this be properly done, it should be helpful, in the proper evaluation of the newer therapeutic products being offered and to be offered from time to time.

For the sake of brevity and clarity, we will not attempt to be comprehensive, but will limit ourselves to some of the more fundamental discoveries. Many of these have been abundantly corroborated and are more or less generally accepted.

There has gradually evolved a rather definite conception of the closely correlated changes occurring in the ovary and endometrium during the menstrual cycle. As menstruation ceases, about the fourth day of the menstrual cycle, the latest corpus luteum is involuting, a certain Graafian follicle is rapidly ripening, and the endometrium has desquamated down to the basal layer and is beginning to regenerate. The endometrial glands are simple tubes. As the days pass, the follicle ripens further, there is further involution of the last corpus luteum, the endometrium becomes hypertrophied and the glands tortuous. At about the middle of the intermenstrual period (14th to 16th day), ovulation occurs with beginning corpus luteum formation. As soon as the corpus luteum forms, the epithelial cells of the endometrium become secreting cells of the beaker type, and a more or less decidua-like reaction gradually occurs in the whole endometrium.

The reaction is complete on the 28th day. At this time the ovum probably dies, the corpus luteum collapses, and the endometrium disintegrates, desquamates, and bleeds. The resulting flow lasts about four days and the cycle has begun again, with another follicle assuming importance.

If, on the other hand, the ovum has been fertilized on or before the 28th day; the ovum and both the corpus luteum and the decidual reaction of the endometrium persists throughout pregnancy. Also there is no further ripening of follicles during this period.

In order to properly grasp the importance of the recent valuable experiments, which have utilized animals, we must thoroughly correlate the animal sexual cycle with that of the human. Excepting certain members of the monkey family, animals do not have true menstruation. The human female does not experience oestrus. However their sexual cycles have been closely correlated.

The phenomenon of heat or oestrus, has been definitely shown to occur at the time of ovulation and corresponds with the middle period of woman's menstrual cycle. At the time, corresponding to woman's menstruation, there occurs in animals a corresponding decidual reaction in the endometrium, followed by involution of the corpus luteum. The remarkable difference is that the altered endometrium involutes without desquamation and bleeding.

The beginning of the recent discoveries may be said to date from 1922, when Allen and Doisy, first made use of a convenient practical test to determine when a small laboratory animal is experiencing oestrus. They showed that a smear from a rat's vagina, between oestrus periods or following castration consists chiefly of leukocytes whereas during oestrus it consists of large numbers of squamous epithelial cells.

This simple test provided an accurate means of testing any substance for its oestrus producing potency. Adult female rats were castrated and injected with extracts of various tissues. Frank first showed the oestrus producing power of follicle fluid. Thus the name "Folliculin" was coined for the oestrus producing hormone.

Subsequent tests disclosed the presence of this hormone in menstrual blood; circulating blood, especially of pregnant women; and in great abundance in the placenta. It was then termed "The Female Sex Hormone."

Later it was found in the liver, testes and

blood of the male as well as in many plants. The hormone is now named "Oestrin."

Allen and Doisy in 1928, isolated oestrin in crystalline form, thus proving its chemical individuality. Many at this time thought that the true and only ovarian hormone had been isolated, and that it alone was the sole regulator of the sex cycle in the female of both man and beast.

However 23 years prior to 1928 Fraenkel had removed the corpus luteum of rabbits by cauterization six days after copulation and regularly prevented pregnancy. An equal amount of cauterization of other portions of the ovary did not prevent pregnancy. Furthermore 18 years prior to 1928, Ancel and Bouen had demonstrated that doe rabbits, mated with sterile males, proceeded to go through many of the changes of pregnancy, including decidual reaction in the uterus and plucking their own fur for a nest at normal time for nesting. Rabbits are almost unique among animals for not ovulating during oestrus unless copulation occurs. The corpus luteum following the ovulation was the only logical explanation of the "pseudo-pregnancy."

The supremacy of oestrin in 1928 was not long lived. In the following year Corner settled the question beyond dispute. He demonstrated the absolute dependence of the decidual reaction of the endometrium, upon the corpus luteum. Twenty hours after mating with normal males he removed the corpus luteum of the rabbit. In all such cases there was an absence of decidual reaction, and the embryos lived, on the poor soil, less than five days. He thus corroborated and expanded upon Fraenkel's experiment.

Corner's next step also devised a test for detecting the corpus luteum hormone. Eighteen hours after impregnation he removed the rabbits' ovaries. The next day he started five daily injections of corpus luteum extract. On the sixth day he found at autopsy, the normal decidual reaction. Under larger doses of extract there was a more marked decidual reaction than in normal pregnancy.

As further proof of a specific hormone in the corpus luteum he repeated the above experiment by injecting follicular fluid, rich in oestrin, instead of the corpus luteum extract. In no case was there a decidual reaction.

Removing the ovaries from pregnant rats caused abortion. Injections of corpus luteum extract carried them to full term.

Corner named the hormone which the corpus luteum extract must contain "progestin." It prepares the endometrium for gestation.

The role of oestrin gradually came to be regarded as the stimulator of the proliferative stage of the endometrial cycle, while progestin brings on the decidual or premenstrual stage. Menstruation, or disintegration of the decidual endometrium was now thought to be due to retrogression of the corpus luteum (with the consequent absence of progestin) due to failure of the fertilized ovum to arrive.

While the existence of these two ovarian hormones is quite well established, their interrelation is still speculative. There is much evidence that the corpus luteum, the proliferator of progestin, inhibits the ripening of the Graafian follicle, which is probably the chief source of oestrin.

During the presence of the corpus luteum of pregnancy, there is no ripening of follicles. A persistent corpus luteum in the cow, has long been known to prevent ovulation and cause sterility. Manual destruction of the corpus luteum restores fertility. The persistent corpus luteum of lactation prevents ovulation. Injection of corpus luteum extract also prevents ovulation and oestrus in animals.

On the other hand, removal of the corpus luteum in animals brings on early ovulation and oestrus. Surgeons have noted that removal of the corpus luteum in women causes early menstruation.

Thus we assume that persistent activity of progestin from the corpus luteum inhibits follicle ripening and its output of oestrin. While progestin is an *antagonist* of oestrin in this manner, it is a *synergist,* in the fact that it finishes the endometrial cycle begun by oestrin.

This gives us a plausible theory of the endocrine control of the menstrual cycle. The oestrin being produced in the ripening Graafian follicle causes the proliferative stage of the endometrium, which stage is complete by the 14th to 16th day of the menstrual cycle. At this time ovulation occurs, rapidly followed by

corpus luteum formation. The corpus luteum produces progestin which causes the premenstrual or decidual stage of the endometrium. On the 28th day if a fertilized ovum does not arrive, the corpus luteum collapses, the decidual-like endometrium loses its progestin support, then crumbles and bleeds. If a fertilized egg *does* arrive, the corpus luteum persists, and progestin continues to support the decidual endometrium until the new inhabitant no longer needs sustenance from it.

All this is very satisfying until we begin to look into further evidence, which shows the anterior lobe of the hypophysis, plays no mean role in the sexual cycle.

While we have known since 1901, when Frölich first described his adiposogenital dystrophy syndrome that there was some relation between the anterior pituitary and the genitalia, this relation did not begin to unravel until Evans and Long, showed in 1921, that injection of alkaline extract of anterior pituitary into young rats, produced gigantism and delayed puberty. The delayed puberty was shown to be due to luteinization of the follicle before ovulation, thus inhibiting rupture of the follicle.

In distinct contrast to the above anterior lobe effect, Smith and Engle produced *precocious* sexual maturity in baby rats and mice, by transplanting anterior lobe from other animals of the same or different species. Zondek and Aschheim in elaborating upon these experiments, proved that transplants from other glands and tissues failed to bring on oestrus, whereas, the anterior lobe brought on a sexual maturity in baby mice, which was so convincing to the adult male, that he often killed the infantile mouse in stormy attempts at copulation.

Anterior lobe transplants have no effect upon castrated females. These and other experiments led to the conclusion that the anterior lobe in some manner mobilized the oestrin and progestin of the ovary.

Zondek and Weisner following similar lines of experiments, at about the same time, have greatly clarified the action of the anterior pituitary.

It was shown that Evans' and Long's alkaline extract, not only produced luteinization of unruptured follicles but caused the decidual reaction in the endometrium. On the other hand acid extracts acted more like the gland transplants in bringing on oestrus and causing ovulation. The oestrogenic hormone was named Prolan A. The decidua producing hormone was named Prolan B.*

The simplest correlation of the action of these four newly discovered hormones was given by Zondek in 1930. Prolan A starting from the anterior lobe stimulates the growing follicle to oestrin production, which in turn stimulates the proliferating stage of the endometrial cycle. Prolan B stimulates the corpus luteum to the production of progestin, which in turn brings on the decidual stage of the endometrial cycle.

The much modified Aschheim-Zondek pregnancy test now used, makes use of the fact that Prolan A is present in large quantities in the urine of pregnant women. (Is this an excretion of a temporarily unnecessary hormone?) Injection of pregnancy urine causes ovulation in the rabbit without copulation, which does not occur in the non-injected rabbit.

While these new discoveries have borne fruit for the clinician in the form of this very valuable and accurate pregnancy test, so far little has been gained in the therapeutic field. In the words of Graves, "The scoffer might well remark, with sly innuendo, that the mountains have labored and brought forth only a ridiculous mouse."

The newer knowledge has not only given us no new proved therapeutic weapons but has accelerated our growing lack of confidence in the old. The literature has been full of conflicting reports, during the past several years, on the value of ovarian extract, corpus luteum extract, and ovarian residue. Frank, Novak and others demonstrated, sometime ago, the very small amount of potent substance in any of these commercial extracts, and their almost complete destruction in the gastro-intestinal tract. The Council on Pharmacy and Chemistry in their 1932 issue of the N. N. R. say: "Rational as ovarian therapy may theoretical-

*The question of the unity or duality of the anterior pituitary sex hormone or hormones is not settled. Other investigators think the different effects may be due to variations in the amount of a single sex hormone.

ly appear to be, the actual results are rarely striking and often nil to the careful observer.'' In speaking of the injectable crystalline oestrin they say: ''Its clinical field of usefulness has not yet been adequately defined.'' They state the other newly described hormones are badly in need of further study before clinical employment.

On the other hand, there are many careful clinical observers, including Graves, quoted above, who are not yet quite willing to believe, that even the older ovarian extracts are impotent against such disturbances as the vasomotor flushes and nervous unbalance of the natural and artificial menopause.

When oestrin was first produced, it was introduced to the profession under the names, ''amniotin,'' ''estrogen,'' ''theelin'' etc. Since its oestrus producing power had been undeniably demonstrated, many of us were easily induced to try it for amenorrhea.

Let us now consider in the light of the above correlated experimental evidence some of the reasons for its clinical ineffectiveness. In the first place, oestrus is not the counterpart of menstruation, but corresponds with ovulation or the middle period of woman's menstrual cycle. To be sure we might reason that if we produce ovulation, that menstruation might follow as a natural course of events.

Then again, we must consider that the human is much bulkier and less sensitive than the mouse. The ''mouse unit'' of oestrin produces a positive vaginal smear test in the mouse. However Marrian and Parkes showed that 200 mouse units were necessary to produce ''The *full* oestrus changes in the uterus necessary for mating and pregnancy.'' A woman is 2,000 times the size of a mouse. In other words we might expect to use 400,000 mouse units to bring on one menstruation. It would require at least 50 times as much or 20,000,000 mouse units, if used by mouth. Injectable oestrin reaches us at about $3.50 per 100 units. Mazer and Goldstein favor oestrin by mouth for amenorrhea, and recommend 1,200 units per day for about two or three months, along with Prolan hypodermically. The cost of twelve 100 unit tablets of oestrin would be $2.40 per day. These authors state that menstruation will usually result, but its continuance depends entirely on the existing state of ovarian function. This would seem a rather high price for such a doubtful result.

A few other observations show us how much we need to learn before becoming enthusiastic over therapeutic application of the newer physiology.

Hartman has shown that hypophysectomized monkeys do not show oestrus even with large doses of oestrin. It has also been observed that women and monkeys at times show regular periodic bleeding without ovulation and corpus luteum formation. The hypophysis must play an even more important role than is now apparent.

Reasoning upon our present incomplete knowledge, we might expect to produce menstruation by some such sequence as suggested by Graves. First, administration of oestrin (or Prolan A if it were available) until such time as the proliferative stage of the endometrium were accomplished then shifting to progestin (which is not available in a very active form) or to Prolan B (which is now available as antuitrin-S.)

In true ''hyperplasia of the endometrium,'' we find our most promising field for immediate usefulness of these new discoveries. This condition is found in typical cases of the so-called ''menorrhagias of youth'' and ''menorrhagias of the pre-climacteric.'' For these conditions we formerly curetted and even did hysterectomies at times. More recently we have used radiation. This condition is due to the failure of the ovary to ovulate and form a corpus luteum. The continued production of oestrin from the non-ruptured follicle keeps the endometrium in an over active and prolonged proliferative phase which eventually bleeds. This phase is not supplanted by the decidual phase, because of absence of corpus lutem formation.

During adolesence, at least, the failure of ovulation would seem to be due to insufficiency of Prolan. In the menorrhagias of the preclimacterium, there is reason to believe that failure of ovulation is due to primary fibrosis of the ovary, and that the usual accompaniment is a hyper secretion of Prolan in an effort to induce ovulation and luteinization in an incompetent ovary.

This condition would reasonably call for

administration of progestin, but so far, no powerful preparation of progestin has been made suitable for human administration. However Novak, Smith, Lawrence, and others have recently been treating these cases, by using Prolan B, in the form of antuitrin-S. with more marked success than has ever before been obtained by organotherapy in any phase of gynecology.

There is no need to feel pessimistic as to the ultimate outlook for organotherapy in gynecology, but a tempered therapeutic enthusiasm is in order, until this new and promising field is a little more thoroughly explored.

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CYCLIC ENTHUSIASM IN ELECTROSURGERY

As Applied to Tonsillectomy

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The dictum, "tempora mutantur, et nos mutamur in illis" has been accepted literally for the many centures since the great Roman first enunciated it to a world waiting for universal phrases. A close inspection of the literature of medicine will, however, convince the observer of the fallacy of the aphorism.—A period of time has passed, and once more, electrocoagulation of tonsils has put in its inevitable cyclic appearance.

It is to be noted, that about every seven or eight years, enthusiastic advocacy of electrosurgery appears sporadically, usually in our larger cities, and soon assumes epidemic proportions. There is, of course, a selective affinity for the medical profession, chiefly the ear, nose, and throat men.

Enthusiastic supporters are not wanting, and the patient, having heard of this wonderful and painless method of removing tonsils, often asks specifically for this type of treatment.

In view of the fact that one of us (Dr. Elmer) did pioneer work in electrocoagulation of tonsils, and, since the inception of the procedure, has employed this method on a series of approximately twelve hundred cases, we feel an opinion should be expressed at this time.

Let us consider briefly the relative merits of electro-surgery as compared with surgical tonsillectomy; the advocates of electrocoagulation of tonsils glibly enumerate the various advantages accruing therefrom, prominent among which are:

(a) *Less local reaction.*

(b) *Absence of Hemorrhage.*

(c) *Negligible amount of pain and discomfort.*

(d) *Eradication of foci of infection.*

(e) *A procedure which will revolutionize tonsillectomy and replace orthodox surgery.*

(a) *"There is less local reaction."* This may have some measure of truth in it, when the coagulation is done by an expert trained to follow a definite technique, but, frequently in the hands of the unskilled, and occasionally in the hands of the specialist, considerable local reaction is seen, in the form of *edema of the throat.*

A competent operator, who has been thoroughly trained in the use of the method, and who understands how to correctly select his cases may get good results. However, those who have not had special training of sufficient length, may have unfortunate and indeed serious results from this technique. Unfortunately a large percentage of men undertaking this method are trained with a three day course offered by manufacturers of electrical devices. They then believe themselves competent to undertake electrosurgical removal of tonsils and in their present status constitute a downright menace.

In our series, especially the earlier cases, edema of the throat became so severe that morphine was indicated, and in one patient we thought a tracheotomy would be necessary. This complication is believed to be a direct result of tissue coagulation.

It is a matter of conjecture how an operator can gauge exactly the depth to which the coagulation extends. The tonsillar capsule is unable to arrest the penetration of current after it has reached this point. There is grave danger of damaging the palatal muscles, hence, an underestimation of the current can produce permanent damage with severe reaction at and in the neighborhood of the coagulation. When this complication occurred we have seen

patients with dysphagia, dyspnea, great pain, toxemia, and extreme discomfort.

It is not our intention to convey the impression that this reaction is seen in the majority of cases, but the percentage is sufficiently high over a long series to warrant a healthy respect for this phase.

(b) *"There is an absence of Secondary Hemorrhage."* This is a mistake. Secondary hemorrhage, occasionally severe, may occur in from two to twelve days after a treatment. It is caused by a vessel bleeding through the coagulated tissue, too strong a current, or the inclusion of too much tissue during a treatment.

These secondary hemorrhages have been known to persist for forty-eight hours, and this in the face of the pre-operative assertion on the part of the operator, that it would be a bloodless operation.

Is it not obviously an easier procedure to control hemorrhage following a surgical tonsillectomy than to grope about blindly in a necrotic mass trying to find the bleeding point?

Tonsillectomy is looked upon by the laity as a simple operation; the electro-surgeon describes his modification as the very apex of simplicity, hence a severe hemorrhage following this procedure is a difficult matter to explain.

(c) *"It is a painless method."* Cellulitis of the neck occurred in two cases of our series following electrocoagulation, prolonged hospitalization was necessary, and the patients suffered exquisite pain. Ten per cent. complained of pain and discomfort in excess of that seen following the orthodox method.

These instances may, in the belief of many, cite the exception rather than the rule, but the mere possibility of this occurrence militates strongly against one of the cardinal claims of the electro-surgeon.

(d) *"This method eradicates foci of infection."* There is clinical evidence to support the assertion that tonsillar remnants harbor more pathogenic bacteria than tonsils removed for the first time. Many patients with pathologic conditions attributable to tonsillitis have found relief only after a secondary operation to remove tonsillar tags. It is, therefore, to be assumed that *complete removal* of tonsillar tissue is necessary and desirable.

A prominent proponent of electro-surgery describes his modification, called diathermocryptectomy, in which he removes only the cryptic area by diathermy. He declares it is a conservative procedure, and likens it to incomplete removal by surgical tonsillectomy. He purposely, or unwittingly, completely overlooks the infected tonsillar tissue which remains, and which constitutes a focus of systemic infection.

The status of the tonsil after coagulation may be summarized as follows:

1. The tonsils are not removed.
2. The inflammatory reaction which follows, cover the tonsillar remnant.
3. The pathogenic bacteria still remain in the necrotic mass.

An advocate of electrocoagulation states:

"The heat necessary to destroy the tonsillar tissue destroys the infecting organisms within the depths of the crypts. A bi-section of a coagulated tonsil shows cells below the line of destruction presenting a normal appearance."

One cannot help but wonder—in how many patients was this true?

In our series of cases where unsatisfactory results followed electrocoagulation and orthodox surgery had to be resorted to, it was not uncommon to find *multiple abscess areas* present in the tonsillar remnant which had been previously coagulated.

In these cases, a sense of false security existed after coagulation. Externally the desired effect seemed to have been accomplished; systemically it was not present, simply because the nidus of infection instead of being apparent had become sealed over.

Novak and Zeller report a case in which severe rheumatic fever followed electrocoagulation of tonsils carried out by one skilled in the technique. A piece of tonsil was covered over by a thick, smooth, white scar. The appearance of the throat months later was such as to warrant a laryngologist in saying there had been a complete removal of the tonsil. Portions of diseased tonsil may be frequently left following surgical tonsillectomy but it is only by electro dissection that such fragments can be so completely hidden from view.

(e) *"This procedure will replace surgical tonsillectomy."* Considering only the standpoint of residual foci of infection, how can such a thing be possible? Since diseased tonsils

are the source of many ailments and coagulation merely removes the surface manifestations and buries virulent bacteria in the tonsillar remnant, what is gained by the procedure? To eradicate these foci we must have recourse to surgery, so why subject the patient to a tedious coagulation and then eventually follow it with surgical tonsillectomy? Certainly from our experience in this series of cases we can neither guarantee a bloodless operation, a minimum of pain, or a cure of systemic disease.

Conclusion:

1. Electrocoagulation has no advantages over orthodox tonsillectomy.

2. It will never supplant surgery and at best, will be a very minor adjunct and have a very limited field of usefulness.

3. Multiple small abcesses remain in the coagulated mass as sources of systemic infection.

4. Electro-surgery offers a temptation for professional publicity. In general its advocates are physicians who subscribe to the unscientific claims of the manufacturers of electrical apparatus.

5. In spite of the improvement which has been made in the technique of destruction of the faucial tonsil by high frequency current, we do not see any evidence of sufficient validity to indicate that the method is other than inadequate and unsatisfactory and that it cannot in any way compete with accepted present day methods of surgical tonsillectomy.

6. We do not propose to take an unreasonable stand in opposing electrocoagulation of tonsils. We wish rather to emphasize the fact that the orthodox method is preferable and safer in the hands of the average man. The technically trained specialist will, no doubt, obtain good results in *certain selected cases.*

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Babinski—Weil test for labyrinth disease, is when a patient walking forward with eyes shut deviates to one side and when walking backward deviates toward the opposite side.

TENDON SUTURING*

Roger W. Hubbard, M. D.
CHICAGO

The earliest surgeons to write on tendon suturing were the Arabian surgeons. Avicenna wrote "every time a nerve (a nerve in early literature means tendon or nerve) is divided or cut through it must be sutured together." There is little in the literature concerning the suturing of tendons from the time of Avicenna to the seventeenth century when Roger of Parma, William of Salicet and Lanfranchi of Milan advocated the sewing of tendons "when cut across through and through." In the nineteenth century Ambroise Pare performed tendon suturing and wrote enthusiastically concerning same, and Andre della Croce, an Italian surgeon, at about the same time advised and performed numerous operations of tendon suturing as well as writing numerous pages on the operation of sewing ruptured and cut tendons.

All of these writings should have been conclusive as to the treatment by suturing of severed tendons, but still the writings of Galen seemed to have a predominating effect on the views of most surgeons as Galen states in his Ars Parva "A prick of a tendon will introduce convulsions" and the profession of that period was content to accept this theory without attempting experiments. In 1598 Jacques Guillemeau writes that "pain, swelling, inflammation and convulsions ensue" when a tendon is pricked with a needle while attempting to suture a tendon, and also he reports, that death is often accountable when a tendon is pricked with a needle because of the sympathetic relation between a tendon and the tendon origin, the brain.

Their writings were a contradiction and misunderstanding with marked confusion in the anatomical data, as, at that time the belief was that the tendons and nerves were the same. Veslingius (in Observationes Anatomiae, Epistola XV, 1740) would not accept these teachings of complications from pricking a tendon with a needle. He reports several cases of suturing the tendon of Achilles without any pain, convulsions, or inflammation. Animal experimentation on tendon suturing was done by Nuck in the eighteenth century (Observat.

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*Presented before Staff of Ravenswood Hospital, Nov. 1932.

rares de medecine et de chirurgie, 1789, vol. page 429) in which he divided a flexor tendon of a dog and sutured the tendon with perfect results; Meekren (Observ. med. chirurg. 1682, Observ. LXII) divided and crushed several tendons in dogs and proved that no pain or convulsions resulted.

Thus did tendon suturing have its ups and downs until in 1814 Monteggia of Italy (Instituzioni Chirurgische, Milano, 1814) and Dutertre of France (Traite de Medicine Opereatorire, Paris, 1816) in 1816 advised and wrote extensively and proved without doubt that sewing of a severed tendon was the proper treatment. From this time on many surgeons wrote concerning tendon suturing, devising numerous methods of operating as well as bandaging and position of parts after operation. Thus the suturing of tendons developed and reached the high point of perfection to which modern aseptic surgery has advanced.

We now know that the parts of tendons distal to their muscular origin are devoid of nerve tissue and the cutting or severing of this part of the tendon causes no pain. Only the surface of the larger tendons contain blood vessels. Tendons are supplied with a lymphatic circulation which must not be shut off in suturing of the tendon.

In the following presentation only the normal severed tendon is given consideration as to its repair and method of repair. Primary suture of a tendon is regarded as minor surgery. There are a few fields of minor surgery which compare with tendon suturing as to the unsatisfactory results even though the operation be performed by the most clever surgical technique. Certain factors which predispose to unsatisfactory results prior to the actual suturing of the tendon may be listed as: 1. Lack of splinting injured parts and thus allowing active pull of severed tendon to retract the tendon ends which may pull infection up along tendon sheaths. 2. Proper sterilization

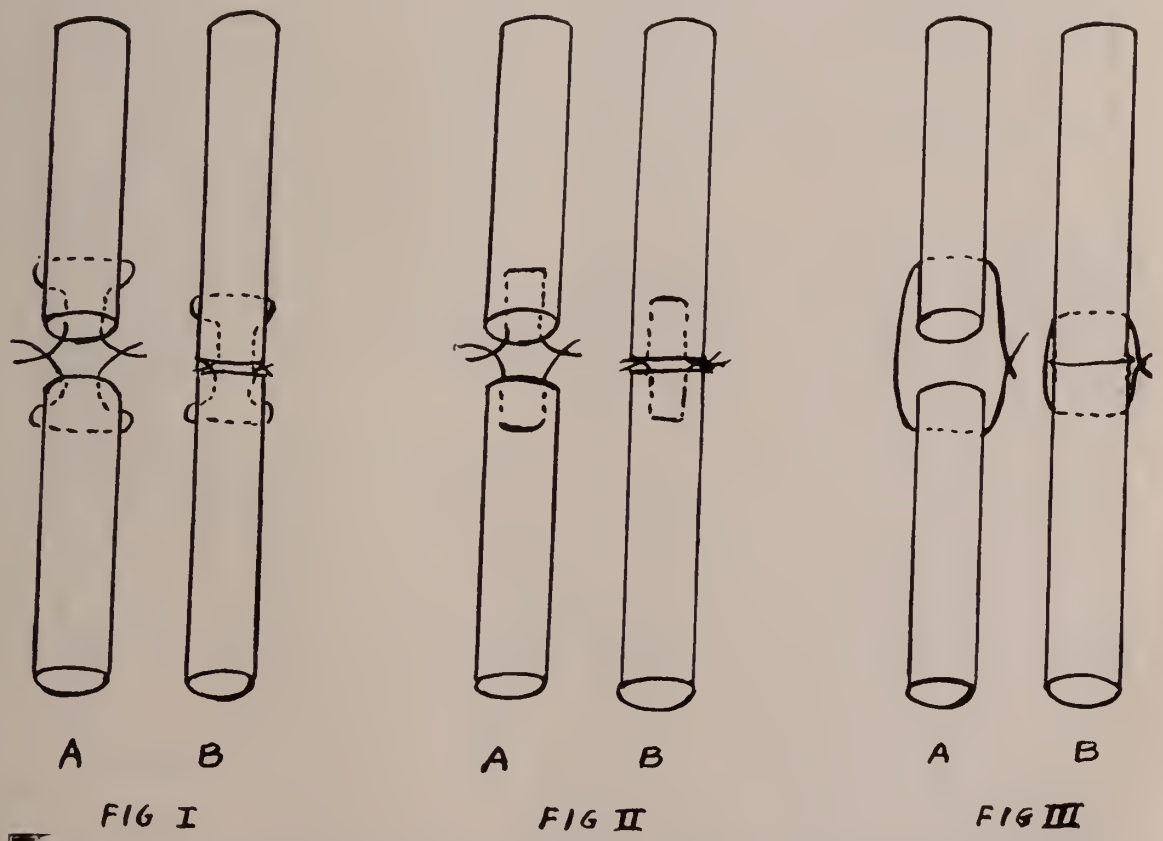


FIG I FIG II FIG III

Fig. 1 shows the Bunnell method of tendon suturing; Fig. 2 the matress method; Fig. 3, the through and through method of suturing severed tendon ends. "A" illustrates the method of introducing the suture while "B" shows the position of the severed tendon ends and the relation of the suture knot to the laceration of the tendon after the suture has been tied.

and debridement of skin around the injury. 3. Proper sterilization within cut area before examination of parts. 4. Gentleness in examination of parts with knowledge of anatomical relations and the position where one might expect to locate severed tendon ends. 5. Overlooking one or more severed tendons. 6. Overlooking other complications as injured surrounding structures.

The laceration of a tendon may be complete or incomplete, clean cut or crushed, or it may be frayed and its fibres shredded and the tendon may or may not be injured in several places.

The treatment of a lacerated tendon should begin at the place of accident by applying a sterile dressing and antiseptic solution and splinting the injured parts and removal to the operating room as soon as possible. This is done without removing the splint.

The method of sterilization of the tissue surrounding the wound is divided into two schools. One group of surgeons, let's call them the operating room technique surgeons, prefer to scrub the wound and surrounding tissue well with soap and water as well as to pour sterile water into the wound giving the wound a flushing action. The second group, let's call them the field technique surgeons, prefer to use only sterilizing solutions such as iodine and alcohol on the wound and surrounding tissue without first removing the skin dirt and grease with soap and water. I consider that a great many cases of infection may be avoided if soap and water and the scrub brush are not used and the following only done. The surrounding parts should be painted with tincture of iodine followed with alcohol. The wound tissue should be well covered with tincture of iodine or iodoform in ether. If iodine is used, the excess amount of iodine should be removed with sponges from the wound. The splint should then be removed by an assistant and the severed ends of the tendons located and

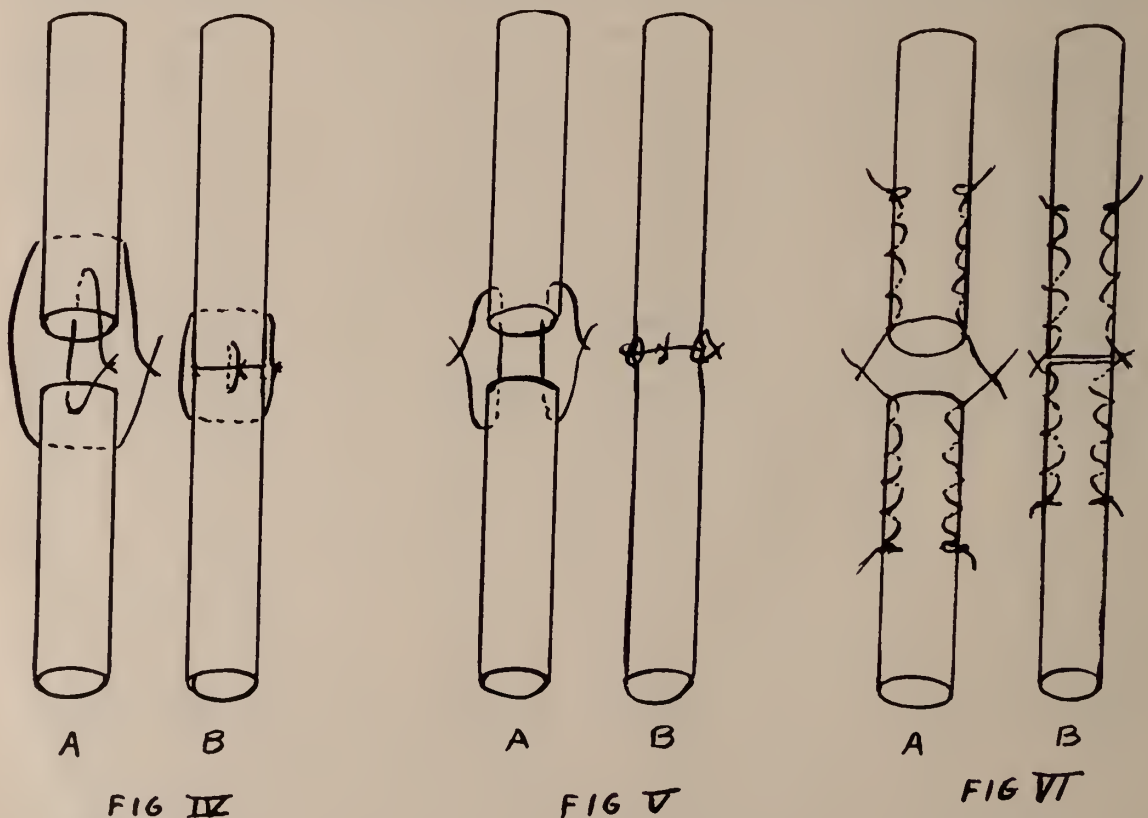


Fig. 4 shows the Friedrich method of suturing a severed tendon, Fig. 5 the method of suturing the severed tendon ends by means of several sutures passed into the axis of the tendon, and Fig. 6 shows the anchored suture method where the suture is anchored and then passed in and out of the tendon wall. "A" illustrates the method of introducing the suture, while "B" shows the final position of the knot in relation to the lacerated ends of the tendon.

pulled down, and carefully matched. The amount of retraction varies with the length of time, after trauma and muscular action, the proximal end retracting the most. Often a forceps can be inserted into the sheath of the tendon and the retracted tendon pulled down, but this should be done very gently. As soon as the tendon is pulled down, tincture of iodine followed by alcohol or iodoform in ether should be applied to the tendon and this worked up along the tendon within the tendon sheath to "kill off" any infection which may have been drawn up the tendon sheath by the retraction of the tendon. The entire wound is then bathed in normal salt solution and the tendon sutured and the tendon sheath is closed with interrupted sutures of fine chromic catgut and the skin is closed with interrupted sutures and a rubber tissue drain may be inserted down to the tendon sheath.

The choice of absorbable or non-absorbable suture is the operator's choice. The size of suture material used is comparable to the size of the tendons sutured. There are numerous methods of suturing tendons. The Bunnell method where the suture is passed transversely through the tendon and then into the axis of the tendon out through the severed ends (fig. 1, a, b). It is then tied to the suture of the other tendon end with the knot between the severed ends. The knot prevents healing of the tendon ends and in case of infection serves as a point holding the infection. This suture also is liable to pull out. The matress suture in all its modifications pulls out easily if pull is exerted (fig. 2, a, b).

The simple through and through suturing of tendons (fig. 3, a, b) most always pulls out, allowing the tendon ends to retract because of the tendency of the tendon fibres to shred. The Friedrich suture (fig. 4, a, b), where one suture is placed transversely through both tendon ends and tied with a second reinforcing suture through the axis of both ends) is of the type which upon shredding of the fibres of the tendon will always pull out. Suturing the edges of the tendon together (fig. 5, a, b) is worthless alone, and never holds.

The method of suturing a severed tendon, as shown in figure 6, where the suture is anchored into the wall of the tendon and then passed in and out of the tendon wall until the severed end is reached, is one of the most accepted methods, but has its disadvantages. As the suture is passed in and out of the tendon wall a number of times, the tendon is traumatized and the surface circulations are interfered with. The presence of the suture material along the surface of the tendon is a constant irritation to the tendon sheath or covering material, and is liable to cause a greater amount of adhesions between the tendon and its covering. The knot at or between the severed tendon ends is a marked menace to healing. This method does have the advantage over the previous mentioned methods as it usually does not pull out, and usually holds the tendon ends together.

All these methods of suturing have their disadvantages as either the suture is without anchorage and pulls out easily when the tendon becomes softened due to infection, or when a pull is exerted on the suture ends. Again they have disadvantages as the suture knot is at or near or between the severed tendon ends, and thus this produces a scar external to the tendon, and usually attaches the tendon ends to the tendon sheath and produces an adherent scar. Again a knot between the tendon ends hinders complete healing of the tendon ends, and should be avoided.

There is only one method of suturing a severed tendon which will hold the tendon ends together under most circumstances. That method is the side wall anchoring through the axis, suturing (fig. 7, a, b, c, d, e). The surgeon takes a good bite with a small curved needle into the side of the tension, about 3/8 to 3/4 inch from the severed end, depending on the size of the tendon. The suture end is passed from above the knot down through the tied loop in the side of the tendon and down the axis of the tendon as shown in figure 7 b. The same procedure is followed with the opposite severed tendon end. This requires four sutures and leaves the "n" ends of each suture coming out of the axis of each severed tendon, and while the "x" end of the same suture remains tied at the place of the first suture or the anchor portion (fig. 7 c). Ends "n" are then passed up the axis of the opposite tendon end and out through the anchor loop of the opposite portion of the severed tendon (fig. 7 d). By making traction on the suture ends "n" and "n" on

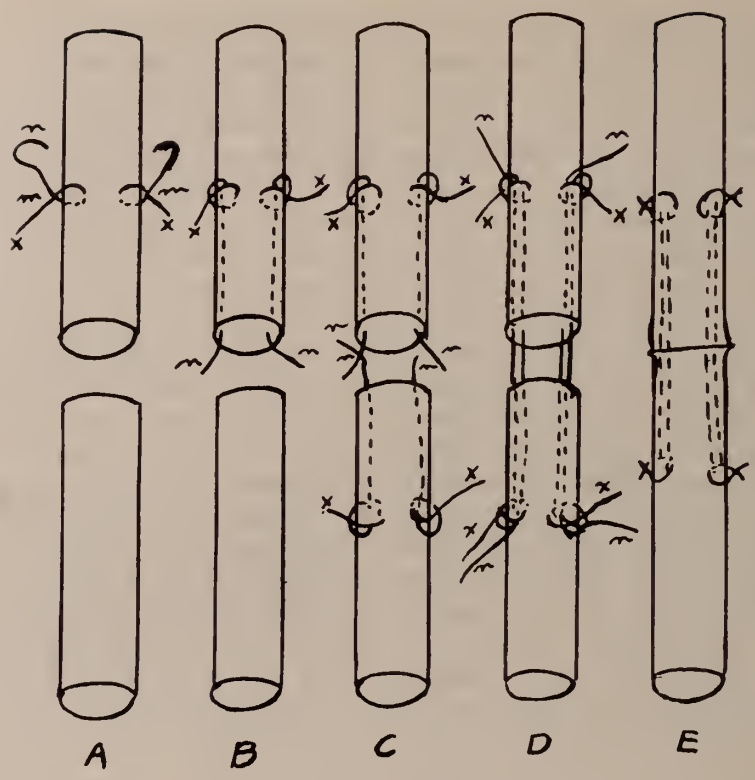


FIG VII

Fig. 7 illustrates "side wall anchoring through the axis" method of tendon suturing. "A," "B," "C" and "D" show the method of introducing the suture, while "E" illustrates the final position of the sutured tendon and shows the relation of the suture knot as distant and nowhere near the lacerated tendon ends. "E" also illustrates that the suture is entirely buried except for the knot at right of anchoring.

the same side of the tendon, the ends of the tendon will be drawn together (fig. 7 e) and then "n" suture end of one severed portion is tied to "x" suture end of the opposite severed portion.

This method brings the ends of the tendons in the closest possible position, and the suture is anchored in such a way that it is almost impossible to pull out. There is no knot at the point of union of the severed ends. There is a minimum amount of scar formation due to the presence of knots, as the knots are in that part of the tendon where the tendon is uninjured, and at a position where the tendon sheath has not been damaged, as it is at the site of laceration. After tendon suturing there is usually a moderate swelling of the tendon, and this swelling tends to tighten the anchor portion of the suture, and causes the suture to hold better. Again, if infection appears around the tendon, as the tendon ends seal themselves off and together by proliferation, the infection does not follow the suture into the axis of the tendon, as it does when the knot is at the site of laceration. For this type of tendon suturing, I prefer silk, if an infection does develop, the silk will hold where catgut will not, and in cases where the infection is treated with Dakin solution the silk will stand the action of the Dakin solution better than will the catgut.

A splint should be applied to the injured part for at least one or two weeks and then active motion begun slowly. Passive motion may be begun on second or third day. If infection develops, the parts should be at absolute rest until infection disappears and the incision opened wide and irrigated every hour with Dakin solution with a therapeutic light applied between irrigations.

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TREATMENT OF ENDOCERVICITIS BY ELECTRO-CAUTERIZATION AND ELECTRO-COAGULATION*

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Most all of the medical practitioners have some experience with diseases peculiar to women. While lesions of the cervix are regarded of non-importance by some they are such common precursors of more serious conditions that their successful treatment cannot be too greatly stressed. One of the commonest diseases is that of endocervicitis with the resulting leukorrhea. In the majority of the cases the discharge comes from the cervix.

Endocervicitis is the result of infection originating in the glands of the cervix or urethra. Bacteria may find entrance from the vaginal opening and set up inflammation which very often becomes chronic. In adults the greatest cause is venereal diseases and cervical tears resulting from labor. Often an improper cervical examination may introduce the infection. The cervical glands infected by more or less virulent bacteria begin to secrete excessively and the result is most of the time leukorrhea, at first muccoid and later mucopurulent.

Many of these infected glands often become plugged. While plugged they continue to secrete, they increase in size and form what we call Nabothian cysts. The cervix often becomes very large due to these cysts. The continuous irritation from the cervical secretions produces an excoriation of the surface epithelium and as a result we have the formation of erosions. Very often following labor cervical tears and later discharge are altogether disregarded if not causing serious distress and as time goes on they develop into a more serious condition involving not only the cervix, but also the adnexa.

In my experience many infections of the adnexa result from such endocervical infections. Often instead of opening the abdomen and removing the adnexa, building up the resistance of the patient and clearing up the cervical infections will cure these cases and eliminate an operation.

Prophylaxis. Much can be done to reduce cervical tears, by the strict adherence to an absolute indication for the application of forceps. In doing a vaginal examination, strict asepsis must be practised. Prophylaxis after parturition will avert a large proportion of cases. Very often a slight infection can be cleared up following the puerperium. To this end a patient should always report for an examination eight weeks after delivery. If tears are repaired after delivery much morbidity can be spared.

I. W. Potter, after completion of the third stage of labor, makes a careful examination of the lower birth canal. He brings down the anterior and posterior lips of the cervix with two cervical forceps. He opens any cysts in the cervix, removes them with a broad sharp curette or with a flat scissors and also any diseased tissue that may be present. The author claims that he cures cases of old leukorrhea by beveling out the cervix and bringing the new made raw edges together with two or three interrupted catgut sutures. In primiparas as a rule no tissue is removed and sutures are merely placed to bring turned edges together. In old multiparas near the menopause no attempt is made to save the cervix. He curettes or cuts down until he reaches healthy tissue and then brings the edges together.

Treatment. In attempting to clear up these infections, many methods have been used. The old fashioned douche is absolutely useless as a cure. In fact the routine douche so common with the laity for cleanliness is almost always to be condemned. The use of weak irritants may produce catarrh of the vaginal and cervical epithelium and so stimulate discharge which it professes to remove. Tampons are only the carriers of such irritants and help only to delay nature's healing process of the cervical surface. While topical application of silver nitrate, mercurochrome and other antiseptics may have a limited use for cases not too far advanced, too often this means frequent visits to the office and no improvement.

*Paper read before the Woodlawn Hospital Noon Day Staff Meeting on Friday, Mar. 24, 1933.

Since the inflammatory lesions in the majority of cases are limited to the cervix and do not extend to the endometrium and the uterine body, curettage for the cure of leukorrhea is to be condemned. Removal of normal endometrium is not only useless, but there is the real danger of spreading an infection to the uterine body endometrium and possibly to the tubes and pelvic peritoneum.

Radium has been used by some gynecologists. It often gives excellent results in selected cases; but it is too dangerous to be employed routinely. Curtis, of Chicago, was able to clear up a great percentage of his cases by repeated application. This method is somewhat expensive, not so practical in the hands of the general practitioner, and sometimes sterility may result.

The operative treatment is no longer the method of choice. Since the advent of cautery, surgery has fallen in importance in most cervical lesions. Trachelectomy should be done in a very hypertrophic cervix with multiple laceration and extensive infections and then only after the cautery has been used.

Mugit claims that trachelorrhaphy did not relieve endocervicitis with its discharge and amputation very often resulted in sterility. Those that did become pregnant either failed to carry to term or suffered from severe dystocia. R. Dickinson also claims that while there must be careful adoption of any particular operative measure to any particular cervix, many of the operative measures may be dispensed with by means of the proper use of cautery.

It was with the adoption of the electric cautery and more recently the electro-coagulation, that the gynecologist obtained the most satisfactory results. In using the electric cautery many workers originally ran the flat blade over the mucosa of the cervix thus destroying the superficial layer of the tissue. As soon however as the mucosa or surface epithelium was regenerated, the discharge began as coptious as ever. Obviously this method failed either to empty or destroy the deep cervical glands. It remained for Guy Hunner of Johns Hopkins to adopt the present lineal incisions deep into the cervical tissue. This lineal cut, often extending to the internal os, empties the glands and causes such necroses that those deep glands very often are obliterated in the healing process.

This method may be applied in the office without anesthesia. In superficial and recent lesions I prefer to use the nasal tip cautery. The Paquelin's cautery should be reserved for more extensive pathology. The patient is put in the lithotomy position. The cervix is pulled down as much as possible with a tenaculum forceps. With the cautery in a cherry heat, strokes are made covering the entire length of the cervical mucosa in a depth of about 3-5 mm. These treatments may be repeated every two to three weeks. In very chronic cases of cervicitis and especially in cases of obstinate gonorrhea, the Paquelin's cautery must be used. In order that the glands can be thoroughly destroyed an anesthetic and hospitalization are essential. After the patient is put to sleep with nitrous oxide, the cervix is dilated and more radical cauterization is carried on. Long strokes are made beginning from the internal os, to the outer lip of the cervix.

After cauterization the patient is warned that during the first two weeks discharge may be very profuse and there may be some bleeding. It is in cases where the Paquelin's cautery is used that hemorrhage is more likely to occur, after about two weeks, when sloughing takes place. During this time the patient is instructed to be within reach of her physician. Also low pressure salt solution douches are prescribed, but they must be promptly discontinued if any amount of bleeding appears.

Electro-coagulation of the cervical canal by the use of diathermy machine has found in my hands a very extensive use at the office, with very satisfactory results. It is a very easy method and very effective one, in all cases of leukorrhea and erosions. The work is very quickly done and it requires but a few seconds to generate the amount of heat required to do it. The cervix as a rule requires no dilatation, because the electrode can be selected to fit any size opening of the cervical canal.

I have procured from a hardware store several different sizes of aluminum rods and with the help of my dentist, who ground the points, I have electrodes that will fit practically any cervical canal. The patient as a rule

need not have an analgesic, but if she is very nervous, she is asked to take three grains of sodium amytal about 45 minutes before she arrives at the office. Application of novocain in the cervical canal does not help much.

This work I usually do about five days after her menstrual period thus giving time for separation of the coagulum and some healing to take place. There is no special preparation, except shaving off the pubic hair in order to secure a better contact, and the wiping dry of the cervical canal.

The procedure is as follows: In the lithotomy position, the indifferent electrode consisting of a tin-foil cut to fit the abdomen of the patient is applied, being careful to lubricate the surface with soap or jelly, so as to get perfect contact. A sand bag helps to keep this electrode in place. The active electrode, a small rod, is inserted into the cervix and kept against the tissue. Both electrodes are then connected to the respective terminal. The machine is set to deliver the maximum current flow. I usually test my machine touching the active electrode to a sheet of metal to be used as the indifferent electrode. And I so arrange the spark gap that the current measures about 2000 milliampers or less. The switch is opened and ready to use with the patient in the circuit. The switch is now closed and the electrode is kept in the cervical canal sufficient time, usually ten to fifteen seconds, until the external os is completely blanched. The vaginal walls need not be protected, because the heat is confined only to the tissue that is coagulated. The patient often feels a severe cramp in the lower abdomen, which however passes away as the electrode is removed. The principle that applies to electro-coagulation is based upon the general principles of electrical resistance. When high frequency current passes through the tissues enough resistance is offered and as a result enough heat is generated to cause electro-coagulation.

If electrodes of equal size were used, the heat generated would be uniform in all parts. If however one electrode is smaller the current in that electrode becomes heavier and greater heat is produced in the smaller electrode. The current density of the smaller electrode is in direct proportion to the size of the indifferent electrode.

The concentration of heat in a small area by the small electrode causes desiccation and destruction of tissue cells. The part affected becomes dry and sloughing takes place after several days, depending upon the depth that the coagulation was carried out. The man who first uses this method may get a good idea by experimenting on a piece of lean meat. This meat is laid on the piece of metal that serves as the indifferent electrode. The different electrode is now touching the meat and the current is turned on until the meat is blanched. Experimentation with increase or decrease of the time and current will give one an idea as to the time required to coagulate this piece of tissue. By cutting the meat one can see the depth of the penetration. Of course the ability to judge exactly the effect of the current upon the living tissue can only be acquired by experience.

Dr. Robbe of St. Louis claims that in chronic endocervicitis the electro-coagulation is to be preferred to the thermal cauterization. The reason is that in order to destroy the deep glands with electro-cautery it necessitates the marked destruction of cervical tissue, whereas in electro-coagulation the heat is generated from within out, and excessive superficial destruction with subsequent cicatrix can be avoided. Robbe maintains that actual thermo-cauterization is preferred to electro-coagulation in the recent post-partum erosions and endocervicitis as in these cases superficial and deep glands are not so extensively involved. In the chronic group electro-coagulation will more adequately destroy the deeper cervical tissue.

Personally I apply the electro-coagulation method in all my cases. I find it easier to coagulate an advanced erosion at my office all in one sitting without an anesthetic than to use the nasal cautery. I feel that Paquelin's cautery cannot be applied at the office without some kind of an anesthetic. If a patient happens to go to a hospital for any other reason and it becomes necessary to be put under anesthesia, I then use the Paquelin's cautery.

Electro-coagulation in many cases is superior to cautery for many reasons:

1. It requires no cervical dilatation and therefore no anesthetic.

2. No hemorrhage occurs during the process or when the coagulum separates.

3. There is very little heat produced in the vaginal surroundings and there is less danger of injuring the cervical tissue.

4. Also, according to Moench, C. L. and Schulman, electro-coagulation is superior to cautery because the scar if formed is more elastic and does not cause distocia.

5. There is less tendency to stenosis.

Contraindications. Acute involvement of the adnexa prohibits the use of either the electro-cautery or electro-coagulation. Also this work should not be done too close to the menstrual period, or in case of pregnancy. Where malignancy is suspected, cauterization should not be done. Schiller's iodine test, if applied routinely before cauterization, invariably will help one to detect the presence of early malignancy.

Complications. Hemorrhage is of common occurrence following cauterization. It occurs when the separation of the sloughing tissue takes place. Stenosis with scar formation and the resulting dysmenorrhea and destocia is a complication not to be lightly ignored.

Some discussion has followed the use of cautery, as to the amount of scar tissue that would result and its effect on pregnancy and labor. Inasmuch as the cautery destroyed only the hypertrophic cervical lining, which was not replaced by cervical tissue, but by squamous epithelium from below, most of the writers maintain that there is no formation of scar tissue and as a result no dystocia. But what about the cases where the cautery penetrates deeply, or in cases of chronic gonorrhea, where repeated cauterization may be necessary? Is not the destruction of the deeper cervical tissue replaced by scar tissue? Of course some workers will say this is a complication of the inexperienced; but who can tell exactly how deep one can go without destroying too much tissue and still destroy the infected glands? Complications do occur in my opinion and I will now cite to you two cases that will illustrate my contention. One was treated by the electro-coagulation method and the other one by the electro-cautery.

By Electro-Coagulation.—Mrs. R., aged 27, Para-2. First baby, normal labor. Second baby, October 1929. Second stage slightly prolonged. Subsequent to the second delivery she developed profuse purulent leukorrhea and a chronic tubo-ovarian infection. On examination the cervix showed a slight tear and an advanced erosion. The patient was treated with local applications, tampons and douches with no results. October, 1931, electro-coagulation was done at my office. This was repeated in November. Following this treatment the abdominal pain disappeared. The erosion cleared up and the discharge ceased. Subsequent to this treatment the patient became pregnant and she went into labor October 25, 1932, about 10 a.m. About 1:30 p.m., she had uterine contractions every 3 minutes with dilatation of only 2 cm. Contractions continued strong until 5:30 p.m. with no progress. The patient was taken to the obstetrical room and the cervix was manually dilated up to 5 cm. She was left alone until 7:45 p.m. When seen that no further progress was made, the dilatation was completed manually. The second stage was very rapid, lasting only 3 minutes. In this patient, there was what I would call an elastic scar tissue that could be stretched manually, but would not dilate by natural forces. From this stretching a slight tear resulted. This patient had a stormy recovery following a severe post-partum hemorrhage and uterine packing was resorted to. The third day the patient developed a temperature of 104, that lasted several days. Two blood transfusions were given and the patient recovered.

By Electro-Cautery.—The second case brings out the accidents and complications of electro-cautery. A young girl, aged 21, came to me with a gonorrheal infection of about a year's duration. She had gone to several clinics, with no results. After a month of treatment, she developed an acute involvement of the adnexa and was hospitalized. After the attack subsided, local treatment combined with diathermy treatment for a period of four months failed to clear up the infection. May 12, 1932, the patient was brought to the hospital and Paquelin's cautery applied. After the reaction subsided the secretion kept up in spite of the local treatment. Sept. 15 of the same year, the patient was again brought to the hospital and another cauterization performed, much more radical than the first. Besides the longitudinal strokes from the internal os outward, the flat blade was applied to several portions of the cervix. The patient was instructed to notify me at the first sign of severe hemorrhage. Twelve days later I was called at midnight and told that she was hemorrhaging. On reaching her home I found that she had lost considerable blood. I performed a gentle packing and rushed her to my office. Upon examination there was a good sized blood vessel spurting blood emerging from the right side of the cervix. The cervix was caught in the tenaculum and the bleeding was controlled. During the healing process the patient reported at my office three times a week and a large sized probe was passed into the canal. In spite of this however, cervical contraction went on until there was practically no opening to be seen. Following her first menstrual period she suffered from severe dysmenorrhea for the first time in her life. During the time she was expecting her second period, she was seized with cramps and backache about eight o'clock in the evening. She continued in extreme distress until the

next day at noon, when she reported at my office. All this time there was no sign of blood. On examination I found a thin membrane closing the cervical canal. This was incised and about 30 cc. of blood passed out. Following the passage of a small probe, the patient has not suffered since.

SUMMARY

1. Treatment of endocervicitis by thermo-cauterization or electro-coagulation is the method of choice.

2. Surgery should only be done after either one of these methods have been tried.

3. Prophylaxis after parturition and repair of cervical tears will help to reduce materially these infections and prevent more serious trouble. The treatment and cure of endocervicitis often means the prevention of cancer.

4. Reduced physical resistance predisposes to these infections. Indiscriminate douching and careless vaginal examination often introduce them.

5. Complications following thermo-cauterization and electro-coagulation are possible and due caution should be used in patients before the menopause.

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THE ATTITUDE OF THE AMERICAN MEDICAL ASSOCIATION TOWARD SOCIALISM, INDUSTRIALISM AND INSURANCE COMMERCIALISM IN MEDICINE

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A stunning blow to the art and science of medicine and to efficient medical service for the public was struck by the highly publicized report of the majority of the Committee on the Cost of Medical Care when they recommended "a basic change in the system of providing medical care for the people of the United States." Their plan consists in the organization of groups of physicians, dentists, nurses and pharmacists to provide community medical centers, to charge "from $20.00 to $40.00 per capita per annum, which equals 40 to 50 per cent, per week" for medical and surgical service. "These centers" the report said, "would provide complete medical services for weekly or monthly fees, with when necessary, some supplementary support from tax funds. Professional procedures would be under the control of the physician, dentists, and other practitioners, and financial responsibility would rest with a board representing the public."

The majority report further recommends that "the cost for community health service be placed on a group payment basis through the use of insurance, through the use of taxation or through the use of both of these methods." In other words the majority report recommends that the practice of medicine should be controlled by insurance companies and politicians; and that doctors be employed for wages, or meagre salaries, just as insurance agents and wardens of penitentiaries are hired; and if per chance the doctor displeases a voter, or does not keep expenses down for the insurance company, he may be fired, and a better politician or a cheaper doctor put in his place. Then he would be left without the opportunity to earn a support for himself and family by his profession.

No doubt Chairman Wilbur, the practicing physicians, public health officials, sociologists, economists and other laymen, who signed the majority report are sincere in their opinion that socialized medicine is not only inevitable but best; and that the "wheels of progress will grind on" regardless as to whether or not they crush the initiative and independence out of the medical profession. The idea of cheap medical service in this period of depression, appeals to laymen who are not familiar with medical procedure, and therefore, do not know when they are receiving the best medical attention. The dissatisfaction on the part of the public with our present system of medical practice is not so much the fault of physicians as it is that when a man on small salary, or a member of his family, is ill, he demands a choice hospital room, special nurses and other hospital luxuries when he may not be able to pay for more than the necessities demanded in giving him all the medical service required in his case.

It is but fair to say that there are many admirable suggestions in the majority report that should be considered, and some of them should be adopted by the medical profession, particularly those relating to the prevention of disease; but the quasi state medicine recommended will not be taken seriously by enlightened physicians who are informed of the

low standards of practice by the medical profession, and the dissatisfaction of the supposed beneficiaries of governmental medical control as it exists in England, Germany, Austria and Russia.

The Minority Report of the Committee on the Costs of Medical Care

Fortunately for safeguarding the public from the most inefficient form of medical practice, and for the maintenance of the lofty ideals and high standards of practice by the medical profession, a minority of the Committee on the Costs of Medical Care had the wisdom and the courage to submit a report signed by nine physicians, and submitted by an eminent practitioner of medicine, Dr. Nathan B. Van Etten of New York. The minority report made seven recommendations, one of which in the following sentence effectively disposes of the majority report: "That the corporate (i.e. community center or other organized) practice of medicine be vigorously and persistently opposed as wasteful, inimical to high quality, or productive of unfair exploitation, of the medical profession."

It also is fortunate for a gullible public, and for the thinking and far sighted members of the medical profession, as well as for the doctors who see only the advantage of a regular monthly income however small it may be, that the officials of the American Medical Association will unanimously support the minority report which stands for individualism in medicine, and unqualifiedly oppose the plan of the majority which would destroy medical independence. Every American physician should read the editorials and comments on the Committee's report in the December third and December tenth numbers of the Journal of the American Medical Association, as he should also read the complete majority and minority reports of the Committee on the Costs of Medical Care; and resolve to do his full share in giving the public the best possible medical service, making his fees commensurate with the service rendered and the ability of the patient to pay, and at the same time make his influence felt in his county, state and national medical organizations for strengthening and enforcing medical ordinances which oppose unfair competition and low standards of medical practice.

It is hoped that the American Medical Association at the Milwaukee meeting will outlaw the kind of practice recommended by the majority report, while at the same time giving assurance to the public that the progressive medical profession of the United States will see to it that adequate medical care will be given to all classes; the indigent, with the charity that the medical profession has always gladly and freely given to the poor; those of moderate means, who should not be required to pay more than they can afford for the care of their loved one when sick; and the rich, who can pay and should be charged reasonable fees for medical care.

The A. M. A. Symposium on Contract Practice

The Annual Conference of Secretaries of Constituent State Medical Associations of the American Medical Association held in Chicago, November 18-19, of last year was devoted to the discussion of contract practice. The complete report of the meeting as published in the December Bulletin, the Official Journal of the House of Delegates of the American Medical Association, makes very interesting reading, particularly since those who participated in the meeting seem to express the attitude of the American Medical Association towards contract practice. Dr. William Allen Pusey, a former president of the American Medical Association, in discussing "The Principles and Policies of the Medical Profession in Its Public Relations" said of "corporate practice":

"Corporate practice controlled by lay business has in exaggerated form the disadvantages of group practice. It has other disadvantages of an entirely different sort and of much greater importance. These grave disadvantages have to do with the fact that they prevent the free choice of physicians, interfere with unrestrained relation between physician and patient, and make the physician an employee, subject to the influence, and often the control, of those above him who employ him. Corporate practice can be justified only under conditions where expedients must be accepted, even though in conflict with sound principles. Some situations of this sort are as follows: Where an individual or a corporation is legally or otherwise responsible for the present or the future physical condition of the patients;

where without the furnishing of the physician by a corporation medical service would not be available to a group or a community."

Dr. G. E. Follansbee, Chairman of the Judicial Council of the American Medical Association, in a paper entitled "Contract Practice—The Octopus in Medicine," was emphatic in expressing his disapproval of contract practice. He said:

"A little thought will convince one that should contract practice become the accepted method of furnishing medical care in those communities suitable to its development, other disastrous effects on the practice and the profession of medicine will occur. Competition on an economic basis will gradually lower the income of the profession until worry over finances will take the place of recreation, study and scientific progress. His enthusiasm lost, the doctor will degenerate into a pill peddler. The idealism of the profession of medicine will fade away, for the character of the profession at large is but the sum of the characters of the individuals practicing it. The door will be closed to the beginner in medicine except as vacancies occur in the groups holding contracts, when room may possibly be found at the bottom of the salary schedule. Advancement, financial or professional, will be slow, for competition compels restrictions on expenses, and vacancies ahead of the beginner will be few because the loss of opportunity for individual competition will bind each employee tightly to the job he holds. The profession of medicine will then lose its attractiveness to high grade men, and the octopus, contract practice, will have wrapped its strangling arms about medicine, the greatest of all professions."

"Advocates of the contract system see only the apparent benefit to people in a lowering of cost because of concentration of practice into groups which can handle a large volume. Some are blind to the ultimate result. Some are not blind but see that such abuses will arise under this system as will force medical care into a function of the state in order to control the quality of service. To such advocates of contract practice it is only a speedy and easy step to their ultimate objective of medical practice by the state or under its auspices."

Dr. R. G. Leland, who recently contributed a series of articles on "New Forms of Medical Practice" to the Journal of the American Medical Association, in an article on "Some Dangers of Contract Practice," said:

"Whereas early contract practice was, for the most part, conducted in places remote from populous centers with easily accessible medical facilities, the present contract practice schemes thrive largely in the urban centers where there is no dearth of other means of providing medical cares. Formerly, most contract practice was legitimate and designed to meet a humanitarian necessity for which provision could not be made otherwise. Lacking the same motive for contract practice when carried into the midst of communities with sufficient medical facilities, the promoters have today, with few exceptions, embraced commercial motives as their chief defense for the system."

"These newer types of medical practice not only limit free choice of physicians but also create groups, cliques and dangerous dissensions within medical organizations. Contract bargaining, solicitation, misrepresentation and underbidding have resulted in unfair competition among physicians in some sections. Moreover, some of these schemes have been organized and are being operated in direct opposition to, and defiance of, the established principles of ethics of the American Medical Association."

"During the periods of economic stress when their incomes are greatly reduced, many physicians grasp at straws for financial assistance. These physicians may adopt contract practice, believing that these schemes offer them a way out of financial troubles. In some sections of the United States, these schemes, developed along commercial lines, have set up a system of competitive commercialism which makes it almost impossible for the private individual practitioner and the recent graduate to make a living."

Dr. D. A. MacGregor, in discussing "Contract Practice in West Virginia" listed the "good features" and "evil features" of contract practice in his state. The following are some of his conclusions:

1. "The welfare of the sick is the prime consideration in any commendable form of medical practice."

2. "In so far as is practicable, the patient

should have freedom of choice in the selection of his physician and hospital."

3. "The quality of medical service should not be jeopardized by either inadequate compensation or an excessive number of patients."

4. "Solicitation of patients is reprehensible. It is undignified. It places the practice of medicine on a commercial rather than an ethical basis. It introduces a form of unfair competition between physicians."

The discussion of the papers by Drs. Pusey, Follansbee, Leland and MacGregor is most enlightening and was participated in by Dr. F. C. Warnshuis, Chairman of the House of Delegates of the American Medical Association; Dr. W. C. Woodward, Director of the Bureau of Legal Medicine and Legislation; Dr. Morris Fishbein, Editor of the Journal of the American Medical Association, Dr. Olin West, Secretary-Manager, and Dr. E. H. Cary, President of the American Medical Association; and a number of secretaries of various state medical Associations.

Commercialized Health Insurance

There have been many rumors that insurance companies expect to send their "high powered" agents out to sell health insurance, which provides medical care to their policy holders by physicians whom they will employ in each town and city in the country, and in hospitals which the insurance companies designate, or will own. The discussions by Dr. Woodward and Dr. West probably express the attitude of the medical profession generally toward this form of medical practice. Dr. Woodward said:

"If the representative of any insurance company says that it is waiting on the American Medical Association or for any other body to propose a plan for health insurance, he is talking nonsense. If he means that it is waiting for the American Medical Association or for some other body to suggest some plan whereby the insurance company will furnish directly to its policy holders medical service, nursing and hospital service, all well and good. I can believe that that idea may be in the mind of some such company. But there is no reason today why an insurance company should not engage in the business of health insurance, exactly as it engages in the business of life insurance, provided its charter permits—and probably the charters of most life insurance companies do permit. By that I mean that there is no reason why an insurance company whose charter permits it to write health insurance should not regularly collect premiums, and when a person is sick pay cash to the beneficiary to enable that beneficiary to pay his hospital and other bills. Many of them are doing that now. They are not waiting on the American Medical Association for anything, unless it is for the sanctioning of some plan whereby the company will employ its own physicians and its own nurses and establish its own hospitals, and give medical nursing and hospital service direct to the beneficiaries of its policies. That, of course, is not necessarily or ordinarily a part of health insurance."

The courageous attitude of Dr. Olin West regarding the practice of medicine by insurance companies is expressed in one paragraph of his discussion. He said:

"Something has been said about insurance companies and how we ought to 'contact' the insurance companies. We are perfectly willing to 'contact' them; we have 'contacted' them. But in most instances the 'contacts' have ended, for the time being at least, when it has developed that the medical service to be delivered under their policies is to be altogether subject to the choice and direction of the companies. There are few exceptions to this rule. In so far as I am concerned, I am not willing, with the interest of the public in mind and with the interest of scientific medicine in mind, to turn over the practice of medicine to an insurance company or to any other corporation. I am not willing to turn it over to anybody except the medical profession, and unless the mandate comes from the organized medical profession, when it has been convinced that socialization is best, I will oppose any movement designed to socialize medicine and to subject the practice of medicine to political domination."

If the organized medical profession of the United States has the vision and the courage to face the insurance proposition squarely before too many of its members have contracted with insurance companies to provide medical care for their policy holders, it will be saved from vassalage to commercial institutions. If we sit down and wait for the "other fellow" to do

something about it health insurance which will pauperize a large proportion of the doctors in every community in the nation, will become so established that it will not be possible to break its strangle hold on the public; and sooner or later the states, or the national government, will take over health insurance as Germany, Austria, Russia and England have done. "An ounce of prevention is worth a pound of cure" in dealing with the sinister influences both inside and outside the medical profession.

Health insurance is highly desirable when it pays the policy holder a stipulated amount of money each week during illness or disability from accidents, thus allowing the individual to select his physician and his hospital; but the health insurance which intends for its beneficiaries to receive medical attention by company physicians, in subsidized hospitals, is a menace to the public, because it will provide inefficient medical service, and it endangers medical initative and medical independence because by that plan doctors will become merely hired men of the insurance companies.

Every county medical society, every state medical association and the American Medical Association, during the year 1933, at the earliest possible meeting, should adopt ordinances, or by-laws to their constitutions, outlawing the practice of medicine by insurance companies. If prompt action is taken the insurance companies will abandon their plans to employ doctors to care for the sick among their policy holders.

There can be no objection to casualty or other insurance companies employing their own physicians to provide surgical attention to employees of corporations in case of accident, or other injuries, for which corporations are liable under the compensation acts of various states; and certainly insurance companies have the right to employ physicians to examine their policy holders, in case of illness in order to prevent being imposed upon by the policy holders, but the employment of a physician, or a group of physicians, by insurance companies to practice medicine for them is most reprehensible and should not be permitted.

The Texas Plan for Control of Contract Practice

The contract practice problem has been disposed of very satisfactorily in Texas; and the Dallas plan, if adopted in every city and state in the Nation, would eradicate the evils of industrial medicine. A number of Dallas physicians had contracts for the medical care of the employees of several corporations. Eighteen Dallas physicians were suspended from membership in the Dallas Medical Society for participating in those contracts. They appealed to the State Medical Association, which upheld the ban on contract practice by the Dallas Society. The physicians having contracts then appealed to the American Medical Association which sustained the action of the Dallas County Medical Society and the Texas State Medical Association; whereupon the eighteen physicians gave up their contracts, and corporation practice except for emergency surgery and in lumber camps and mining camps has been eliminated from Texas. The following amendment to the by-laws of the Dallas County Medical Society, was upheld by the Texas State Medical Association and by the Judicial Council of the American Medical Association:

"No member or combination of members shall either directly or indirectly enter into contracts or agreements to render professional service under the system known as Contract Practice except in situations wherein the needed medical and surgical services cannot otherwise be obtained. (As, for instance, railroad surgeons, physicians or mining camps, lumber camps, instances to meet necessities of patients to be served)."

"Any member or members entering into contract with individuals, corporations or other concerns to provide medical and surgical services for groups of individuals, or individual groups, to cover a period of time, for stipulated remuneration shall be in violation of this regulation and subject to the penalty otherwise provided for unethical conduct."

Most of the physicians with whom I have discussed the subject, while they disapprove of the majority plan, say that "the insurance companies, or the state, or both will take over the practice of medicine and there is nothing that we can do about it." Fortunately those in authority in the American Medical Association do not take that attitude, and individualism in medicine will not be sacrificed on the

altars of the ignorance of socialism or the greed of industrialism and insurance commercialism.

MOUTH INFECTION, ITS SYSTEMIC RELATION AND DIAGNOSIS*

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It is a great honor to address this joint meeting of the McLean County Medical Society and the McLean County Dental Society. I compliment you on your progressiveness in holding this joint meeting. Dentistry, as it is practiced by the enlightened members of the dental profession, plays a significant rôle in health service. The physician who obtains the efficient cooperation of the dentist will be able to render an added service to his patients, both from the standpoint of prevention as well as treatment. The dentist in his recognition of the fact that the mouth is part of the human body is realizing more and more that many mouth conditions may have as an underlying cause some constitutional disorder which requires the active cooperation of the physician. A joint meeting, of this kind, therefore, with its social contacts in addition to its professional discussion of mutual problems, plays no small part in furthering that cooperation which has for its basis the most efficient possible service to the patient.

In a previous paper read in 1917, I discussed more than sixty general conditions that manifest themselves in various types of inflammation in the mouth.[1] These systemic involvements were classified under acute infectious diseases, blood dyscrasias, kidney diseases, diseases of the nervous system, the ductless glands, the digestive system, diseases peculiar to women, drug and metal poisoning, general infectious diseases, and miscellaneous diseases and conditions.

With our present knowledge, I have no doubt that the number of these related conditions could at least be doubled. Manifestations in the mouth may be the first, or at least, one of the *early* signs of systemic disease elsewhere. In some systemic diseases a diagnosis may be made on the appearance of the mouth alone.

In this paper I will limit myself to a discussion of the common mouth infections that can be a factor in the incidence of the so-called "focal infection" diseases. In connection with the lantern slides however, I will mention some of the most important phases of several other mouth conditions that are of interest to both the physician and the dentist.

Focal Infection. Focal infection is not a fad, and it has not passed the way of the fads. It is still the most important problem before the dental profession. Furthermore, the competent and thinking dentists are not becoming more radical in regard to the removal of mouth foci, neither are they becoming more conservative. The pendulum with them is not swinging first this way and then that. They have been following fairly closely the same procedures in this regard for at least fifteen years. This is true particularly of the competent oral surgeon.

Oral surgery is a specialty which stands midway between medicine and dentistry. The oral surgeon in addition to his D.D.S. degree has either an M.D. degree, or has pursued postgraduate studies covering fields of medicine that might have relation to conditions that present themselves in the mouth. In addition to this basic study he has usually obtained clinical experience in this field before holding himself out to the public as a specialist in oral surgery.

In the practice of his specialty the oral surgeon usually has close contact with both the physician and the dentist. Some patients may come to him directly but the larger proportion is referred to him by members of the medical and dental professions. A high percentage of these patients is sent for his cooperation in the elimination of infection that may have a relation to the so-called "focal infection" diseases. Through the search for mouth infection in these patients he becomes trained in the details of diagnosis, and because he is daily examining many radiographs of oral conditions and afterward operating and seeing the actual conditions present, he develops the ability to recognize the finer points in radiographic interpretation.

The oral surgeon through experience appreciates the relative importance of various infections of the mouth. He also realizes that conditions that in one patient may have little significance, in another patient, or in the same patient at another time, may be serious. Varia-

*Read at a joint meeting of the McLean County Medical Society and the McLean County Dental Society, February 13, 1933.

1. Thomas, E. H.: Is the Cause of so-called Pyorrhea Alveolaris Constitutional? Dental Review, Mar. 1917.

tions in immunity and susceptibility in the patient, and in virulence of the organisms, accounts for this. Thus the oral surgeon routinely experiences the satisfaction of relieving many patients of systemic conditions of the focal infection type.

Many members of the dental profession are vacillating in their opinions as to what constitutes focal infection in the mouth and how it should properly be handled. A great deal of this vacillation may be attributed to the fact that these members follow the voluminous published literature on this subject, perusal of which leads one to believe that the literary abilities of many of the contributors often exceed their scientific attainments. We find many dentists following the advice in such articles and allowing the most manifestly infected teeth to remain in the mouths of their patients, with the excuse that masticatory efficiency must be maintained, even though in practically all cases satisfactory replacement of teeth can be accomplished by a competent dentist.

In discussions questioning the importance of focal infection, we find mentioned the fact that a tooth was removed but the systemic disease did not disappear. No inference should be made unless *all* infection in the mouth is removed as well as all sources of infection elsewhere in the body.

In going over our records of consultation cases we find mouth infection in roughly 95%. Many of these patients have had their mouths supposedly put in condition, possibly one or two or three months previous to the consultation. This was done because they were suffering from some disease condition thought to be due to focal infection. In the face of the above situation it is amusing to read in the physical findings of cases reported in medical literature such a large proportion in which the statement is made "mouth and teeth negative."

If a so-called "focal infection" disease does not get well after removing the focus, that failure to improve is not proof that the focus was not the source of the primary infection. Take as an example a joint infection that resulted from infection about a tooth. The infection is now in the joint, and even if the tooth is removed nature may take a long time to overcome the joint infection, or may never be able to eliminate it. In many cases, however, nature could overcome the joint infection if the continuous supply of additional infection was stopped. In such cases, removal of the focus stops this ingress of further infection, and nature promptly, and often spectacularly, overcomes the infection present in the joint.

One must also keep in mind that a constant flood of toxins from a focus over a long period of time can result in such degenerative cellular changes elsewhere that the resulting symptoms would never disappear. It is now too late to prove a relation, just as it is impossible to prove that a patient, with all foci of infection eliminated would have developed systemic disease if the foci had not been removed.

We often hear patients remark that Mr. Blank is eighty years old and has carried several abscessed teeth in his mouth for the last thirty years and, therefore, such conditions are not serious. This is poor logic, or no logic, when we appreciate the influence and variations of immunity and virulence. For every one person carrying abscessed teeth for thirty years with no apparent ill effects, how many, how many hundred, are in their graves from allowing such a condition to continue.

Statements have been made that improvements in systemic conditions following the removal of teeth are the result of coincidence or are a cycle in the natural fluctuating course of the disease. It is recognized that such factors must be given consideration. Take, however, the case of a patient who has been treated for some disease condition which does not respond to the usual appropriate medical treatment, even after all supposed foci have been eliminated, including two or three infected teeth. The patient is given a thorough mouth examination, and all infection about the teeth is diagnosed and eliminated. He shows some improvement one or two days later and rapidly recovers from the systemic disease. When one sees daily in his practice such occurrences, as well as many others much more spectacular, one should not come to any other conclusion than that focal infection is a cause of many infective conditions elsewhere in the body and that diseased teeth are a frequent focus of infection.

I call attention to the fact that I am not stressing tooth infection to the exclusion of tonsils, sinuses and other foci in the body. Everything said in this paper in regard to foci

of infection includes all foci outside of the mouth. There are two things, however, I should mention that may influence tooth infection to be a more frequent focus. One is that the total area of ulcerated surface around the teeth, in a fairly advanced pyorrhea condition, amounts to about six square inches. The other is that there is one hundred or more pounds pressure in the average human bite, and this is applied several hundred times a day. Realizing this, one should try to visualize a chronic infection, confined in bony walls, and a tooth root acting like a piston in a syringe, exerting against such an infected area, this frequency of high pressure.

Another important thing should be stressed. A patient should never be told that a certain diseased tooth or other focus is the cause of his trouble, and that if he has it eliminated he will get well. Such statements are often the cause of serious misunderstandings in our relations with patients and in the relations between the two professions. The removal of one focus is just one link in the chain of treatment of a given condition.

The negative pulpless tooth. Under this heading I refer to a pulpless tooth that in the radiograph shows no evidence of change in the bone structure around its apex, and that clinically presents no abnormal symptoms. This is the type of tooth about which centers the greatest amount of argument and discussion.

Various investigators have found that only a small percentage of negative pulpless teeth is free from the presence of bacteria. One would expect that those harboring bacteria would cause some change in the apical tissues before they would become sources of infection, and in general this is the sequence. Such is not, however, always the case and it is a common occurrence to have a serious systemic infection promptly disappear after the removal of one negative pulpless tooth. Furthermore, there may be slight apical bone change without such change being apparent in the radiograph. This situation arises because of the angle at which the x-ray is directed and is found most frequently in connection with upper teeth. In such cases the shadow that appears on the film as the apex of the tooth is not the apex at all, but is the side of the end of the root.

There is no diagnostic means at our disposal which will enable us to determine whether any one such pulpless tooth, with negative findings is or is not a menace to health and life. The radiograph does not reveal the virulence of infection and a negative pulpless tooth may be a more dangerous focus of infection than an adjoining pulpless tooth which is involved by a large area of bone destruction.

Therefore, in the case of systemic infection that does not respond to appropriate medical treatment after all other foci of infection are removed, we advise the removal of the so-called negative pulpless teeth. In this connection we must realize that health and life are more important than all the teeth in the mouth.

In the case of a patient apparently in normal health, we are abusing his trust in us if we do not inform him of the potential possibilities of such a tooth.

From the standpoint of prevention of future trouble we prefer that such teeth be eliminated from the mouth. If they are retained it must be at the patient's risk and with his full knowledge of the possibilities.

A Thorough Mouth Examination. The following is the usual procedure in making a thorough mouth examination from a focal infection standpoint. Small film radiographs are made of all areas of the jaws where teeth have been removed as well as where teeth are present, and a sufficient number of radiographs are taken to include every area from at least two different angles. This procedure is necessary in any complete search for focal infection even if the patient is edentulous and has been wearing full dentures for several years. These radiographs are examined very closely and if there appear any areas in which there is a suspicion of abnormal changes in bone structure that are not clearly and definitely shown, additional radiographs are made from a sufficient number of different angles to obtain as complete a visualization as possible.

This may result in the shadows of the teeth being distorted in some radiographs, the apices of roots not appearing in others at all, the crowns of teeth not included in some, etc., but this does not matter because radiographs should be made to give us information, not to result in pretty pictures. The whole lower border of the body of mandible can be shown on small mouth films more clearly than on extra-oral plates but much possible information may be lost if the

shadow is distorted to include the crowns of the lower teeth. Extra-oral films are made of regions where suspicious areas cannot be included in small mouth films.

The next procedure, after obtaining the necessary radiographs, is to thoroughly examine the teeth and their adjacent structures in conjunction with the interpretation of the radiographs and a history of all previous symptoms and operative interference. A chart should be made of all abnormal findings. A fine exploring instrument is passed under the gum tissues to examine the depth of attachment of the pericemental membrane around the entire circumference of every tooth and the extent of detachment is drawn on the chart. All missing teeth and all pulpless teeth are noted. All abnormal bone changes are recorded and whether or not such changes are due to infection. All teeth that are not definitely known to be pulpless are tested with an electric pulp tester and proof is obtained of their vitality. Deposits that irritate the gum tissues are noted as well as inflammation due to sharp margins of fillings, ill-fitting bridge work, flat contact points, no contact points and cavities. Record is made of all impacted or supernumerary teeth and whether or not saliva has access to any portion of their crowns. All areas where teeth have been removed are thoroughly examined for broken off buried roots and for areas of retained infection. Abnormal occlusion is noted where it may be the cause of changes in the tissues surrounding the teeth.

After obtaining a thorough examination as above the dentist should classify all disease conditions and other abnormal findings and send a report with recommendations to the physician. Such a report might be classified as follows:

1. a. Pulpless teeth with abnormal bone changes around their apices or having clinical symptoms.
   b. Teeth affected by so-called pyorrhea to the extent that they cannot be made healthy by treatment, including third molars with deep pockets adjoining the cheek or throat.
   c. Broken off buried roots in edentulous areas.
   d. Impacted teeth where saliva has access to their crowns, and which cannot be moved into their normal position.

Recommendation—all above teeth should be removed.

2. Infected cysts and areas of retained infection.

Recommendation—such areas should be opened up and eliminated.

3. Pulpless teeth that show no evidence of bone changes around their apices and which present no clinical symptoms of inflammation.

Recommendation—No recommendation—just the statement that such teeth are not above suspicion from a focal infection standpoint.

4. Impacted and supernumerary teeth that do not communicate with the mouth and cannot be moved into their normal position. (It must be mentioned here that, excepting third molars, most impacted teeth in children can be moved into their normal position.)

Recommendation—such teeth are not infected but can have a serious effect on nerve structures and for many other reasons should be removed.[2]

5. a. Teeth affected by so-called pyorrhea but which can be treated and made healthy.
   b. Gum irritation from deposits.
   c. Gum irritation from sharp margin of fillings, ill-fitting bridgework, flat contact points, no contact points, and cavities.
   d. Gum irritation from malocclusion.

Recommendation—the above conditions can be eliminated by efficient dental care.

All of the above applies to deciduous teeth as well as to permanent teeth. No one knows what proportion of heart disease in children is caused by infected teeth, and that disease in children has assumed alarming proportions. Under such conditions, we should not temporize.

How should the physician use such a report? All of the recommendations excepting No. 3 (in regard to negative pulpless teeth) are definite and the physician should instruct the patient to follow the advice of the dentist, and have the mouth taken care of as per these definite recommendations. The physician should then communicate with the dentist advising him of the patient's general condition, and of the amount of surgical interference that can safely be proceeded with at each appointment. The negative pulpless teeth should be handled according to the recommendations made previously in this paper.

2. Thomas, E. H.: Oral Surgery Conditions of Interest to the General Practitioner, J.A.D.A., 16, 1997-2004, Nov. 1929.

How different is the above type of examination and consultation from that often obtained by the physician. A certain proportion of the dental profession are still working on teeth, not on patients; in other words these dentists are not recognizing all of the disease conditions that are present in the mouths of their patients, and do not realize the danger to health of those diseases that *are* brought to their attention.

Some of these dentists slide a mouth mirror over a few teeth, record the gaping cavities, tap a tooth here or there and ask if any of them hurt, this being their idea of a mouth examination, even if the patient has been sent by the physician for a diagnosis of the condition of the teeth and mouth in regard to focal infection.

Other dentists are more advanced professionally—they refer the patient to an x-ray laboratory, have some pretty pictures taken, receive a detailed "diagnosis" from the x-ray laboratory, of course, made without a mouth examination, and this so-called "diagnosis" is relied upon as final.

It is gratifying to know that only a small proportion of the dental profession includes the type of dentists just mentioned. The physician receives from such men a report that the mouth is "O. K." or that one or two teeth, those that are hurting the patient, should be removed. The physician accepts this diagnosis, has these teeth removed and the patient does not improve under usual treatment. Finally the physician becomes suspicious and refers the patient to a dentist who makes a thorough examination and finds additional infection. This is eliminated and the patient makes a rapid recovery.

After several similar experiences what wonder is it that many physicians lose faith in the majority of the dental profession, and what wonder is it that many of them order radiographs of their patient's mouths, interpret them to the best of their ability, and attempt to decide for themselves which teeth should be removed. One can hardly blame them, under the circumstances, but their method may result in just as much misleading information as that obtained from the type of dentist mentioned.

Radiographic Intrepretation. Because many physicians are trying to interpret radiographs of the teeth and adjoining structures, a few comments on radiographic interpretation may be of interest. The importance of a *complete* radiographic examination of all mouths must be stressed, and this must include all areas where teeth have been removed. A patient who has upper and lower dentures (plates) is often amused when a physician or dentist advises a radiographic examination of his mouth. When the cause of systemic infection is being sought it is just as important to radiograph areas where teeth have been removed as the regions where teeth are present. Some statistics show that one third of all edentulous mouths contain root tips and infection, and that one fourth of all mouths where one or more teeth have been removed harbor disease in one or more of those areas. Where teeth are present and appear perfect, it is surprising the conditions that are often demonstrated by radiographic examination.

It is important to realize that a radiographic interpretation is not a diagnosis, as no diagnosis can be made without a thorough mouth examination and the use of a pulp tester. Consequently x-ray laboratory "diagnoses" that are made from the films alone at the end of the day and mailed to the unsuspecting physician or dentist are often worse than worthless.

My attention is called to this subject quite frequently every day because of the number of radiographs, plus "diagnoses" from various sources, which pass through my hands. The "diagnoses" usually pass through my hands much more rapidly than the radiographs, and many of them are either laughable or sad, depending on whether one is thinking of the so-called diagnostician or of the patient. If the radiographer desires to render more service than just making the radiographs, he might call attention to all abnormal changes demonstrated in the films. The cause of these changes, the diagnosis, must be made by the man who makes the mouth examination, which examination may reveal many disease conditions that cause no change in radiographic appearance.

Another thing: The radiograph never lies. When it is thus accused, the doctor is reading into it something that "isn't" or missing something that "is."

There are many normal dark areas revealed in radiographs, and these must not be confused with evidence of pathologic change. Also some dark areas are abnormal but not pathologic. One thing must be stressed: Many films have inherent imperfections which may simulate

various abnormal conditions and may lead to unnecessary operations.

Radiographs are shadow pictures of everything that is interposed between the x-ray machine and the film. To be able to interpret radiographs properly, one must be able to visualize the various structures from the appearance of their shadows, and also to visualize their relationship. A man skilled in interpretation can often visualize even the third dimension from the superimposed shadow relationship of the various structures, and his skill in so doing depends somewhat on his ability to recognize, from the shadows on the film, the angle of direction of the x-rays through the tissues.

Innumerable illustrations might be given that would impress on the most skeptical the fallacy of attempting mouth diagnosis by means of the usual set of radiographs of the teeth without a history or mouth examination. I will enumerate only a few.

A tooth, the root of which has been perforated on its labial or lingual surface may appear normal in the radiograph.

Porcelain fillings resemble cavities.

A tooth may appear to have a large abscess at its apex and yet be vital and healthy, the abnormal appearance being caused by malocclusion.

A large cyst or infected area may appear to involve several teeth when only one is affected.

Foreign bodies in the lips or other structures may appear to be imbedded in the maxillae or mandible.

Postoperative appearances of the bone following the removal of cysts, impacted teeth, etc., resemble disease.

Operative procedures which remove the periosteum result in healing with fibrous tissue which has an appearance in the radiograph similar to a disease area.

Too much penetration or exposure of rays sometimes obliterates the internal cancellous tissue of the bone, giving the appearance of a large area of disease.

The buccal and lingual cortical plates of the mandible may be so thick and dense that pathologic changes in the cancellous bone may fail to be differentiated.

An impacted tooth may appear to have absorbed part of the root of an adjoining tooth when there is no contact whatever.

An impacted tooth may appear to be in the jaw at a certain angle when it is actually at an entirely different angle. In fact, a tooth that is slightly impacted may be radiographed at such an angle as to appear in a horizontal position.

Large infected cysts or growths may be in contact with the surface of the bone and the film show no radiographic bone changes.

An appearance of extensive pyorrhea may be the result of marked gum inflammation from various causes, e.g., excessive mercury medication. The calcium salts may be absorbed from the bone to a considerable extent but with no destruction whatever of the basic structure of the bone or the attachment of the pericemental membrane to the teeth.

A tooth may have had the pulp die under a filling, become abscessed and have a chronic sinus discharging pus and yet appear normal in the radiograph.

Two adjoining teeth may seem to be in perfect contact when actually there is a space between them.

A filling may appear to have a perfect margin under the gum in the interproximal space and actually be overhanging a considerable amount with resulting gum infection.

The root canal of a tooth may appear to be filled exactly to the apex and yet actually extend some distance past the apex.

One tooth may seem to have a much longer root than an adjoining tooth when they are in reality both the same length.

The labial and lingual surfaces of the teeth and the tissues adjoining these surfaces do not show clearly, if at all, in the average radiograph.

Inflammation, unless it is accompanied by definite bone changes, gives no indication of its presence in the radiograph.

Along the line of aids in diagnosis it must be pointed out that the extensively advertised mouth lamps do not, as their sponsors would have us believe, "immediately determine and diagnose practically every debatable condition that presents itself in routine practice." A diagnosis of root-end infections determined in this manner does not check with the actual conditions present—but some of these lamps do give good light.

In conclusion, I would advise that the dentist embrace every opportunity to obtain a greater

understanding of the relation of mouth infection to systemic disease and that he develop his diagnostic abilities to the extent that he is able to recognize all infection in the mouth and be able to give to the physician the efficient cooperation to which he is entitled.

I would suggest, also, that the physician insist on thorough mouth examinations of his patients and on the elimination of *all* mouth infection in his systemic disease cases. From the standpoint of prevention such a procedure is advisable in all of his patients. If he follows these suggestions and carefully observes the results, I feel that he will be encouraged to continue this procedure.

SUMMARY

1. Joint medical and dental meetings are mutually advantageous.

2. Oral surgery as a specialty stands midway between medicine and dentistry.

3. Focal infection about the teeth is discussed at length including vacillating opinions relating thereto.

4. The problem of the negative pulpless tooth is discussed and recommendations made.

5. An explanation is given of what constitutes a thorough mouth examination and how it should be reported to the physician.

6. Illustrations are given to emphasize the fallacy of attempting to diagnose mouth conditions by means of radiographs alone.

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FOREIGN BODY IN MEDIASTINUM: ESOPHAGOSCOPIC REMOVAL UNDER ROENTGENOSCOPIC GUIDANCE

According to Herman J. Moersch and B. R. Kirklin, Rochester, Minn. (*Journal A. M. A.*, Jan. 21, 1933), mediastinitis following perforation of the esophagus by a foreign body always constitutes a grave surgical problem. Such a complication may be spontaneous or may occur from attempted removal or displacement. The proper procedure in dealing with such a problem is open to much speculation. The situation of the perforation, the degree and extent, whether the foreign body has partially or wholly entered the mediastinum, and its opacity are some of the factors that necessarily influence judgment as to treatment. The authors report a case which constitutes, they believe, a new endoscopic experience in the treatment of a patient and in the removal of foreign body, which was lying entirely in the mediastinum and which was successfully removed under roentgenoscopic guidance, by means of endoscopy.

ABDOMINAL EMERGENCIES DEALING ESPECIALLY WITH ABDOMINAL INJURIES*

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Abdominal emergencies resulting from external violence or the so-called "internal injuries" are relatively frequent and may occur from a localized or a diffused violence, the resulting pathology depending upon the origin, extent, type and site of the impact. Like traumata of the contents of the skull or of the thorax, "internal injuries" may or may not be associated with a wound leading to the surface. When an "internal injury" is not associated with an external wound the terms frequently used are "non-penetrating injuries to the abdomen," "Subcutaneous abdominal injuries," "Internal injuries without penetrating wounds," etc. When the "internal injury" is associated with a wound leading to the abdominal surface, that is with an external wound, the term "penetrating wound of the abdomen" is applied. This later type of wound is most frequently the result of gunshot or stab. In considering abdominal emergencies resulting from abdominal injuries, this paper will consider first "non-penetrating injuries," second "penetrating injuries and finally "injuries of the genito-urinary tract."

1. *Non-Penetrating Injuries of the Abdomen*

In non-penetrating injuries every surgeon with extensive experience in traumatic surgery, realizes the great difficulty that exists in discriminating in the early stages between those cases of abdominal injuries which are trivial and those in which laceration in the intestine has occurred. In general as stated by Dickinson, if six hours after an abdominal injury there is abdominal pain accompanied by vomiting or a rising pulse or increasing rigidity, exploration is indicated. This is true but most surgeons will agree that this is rather late to wait as hemorrhage and peritonitis from intestinal spillage will have progressed to a point that makes the prognosis much less favorable. The difficulty in the diagnosis of the pathology in non-penetrating injuries is present in practically every case, especially in

*Read at a meeting of the Chicago Medical Society, February 1, 1933.

the early stage when surgery can be of greatest help. The surgeon is perplexed whether to operate or not. An extremely slight sign of injury to the abdominal wall may be present when there is severe intra-abdominal injury. Localized rigidity of the abdominal wall over the site of lesion is of great importance. And in case of doubt one might well decide to operate.

Operation, however, should be deferred until the primary shock has subsided. There is always a widely divided opinion as to the advisability of an exploratory laparotomy. However, as pointed out by Just, since contusion injuries of the abdomen have been treated surgically, there has been an increase in the incidence of recovery. The mortality ranged from 60 to 70 per cent. in the period from 1885 to 1890, decreased to 30 per cent. in the period from 1890 to 1900, and since then has remained at about 30 per cent. The decrease in the mortality has been due to improvement in the diagnosis and in recognition of the therapeutic indications, especially the correct time for operative interference. Keeping in mind that the points of least resistance, so far as the thickness of the abdominal wall is concerned, are the linea alba and the lineae semilunares. In the systematic examinations, attention should first be directed to the history. This is important because the mechanism of the injury is frequently pathognomic. Circumscribed trauma, for instance, may cause subcutaneous rupture of the small intestine, whereas all injuries of the liver, spleen, pancreas, and blood vessels are the result of a traumatizing, crushing type of force applied over a broad surface. A force applied over a small area commonly results in damage to the organ immediately beneath, while a diffuse blow or crushing injury will cause damage at the fixed points of organs, such as the mesentery or pedicles which are more distant.

The mechanics of visceral injuries. The solid organs, such as the spleen, liver, pancreas, and kidney may be lacerated by a direct force or a transmitted force. As noted by Robertson the tough limiting membranous capsules of the liver and kidney have a certain elastic protective action which renders these structures less susceptible to transmitted force than the spleen which lacks such a protective membrane and hence more frequently suffers severe destruction and fragmentation with comparatively slight force.

Hollow viscera suffer bursting lacerations by the transformation of a blow into hydraulic force, which often is directed to a distended viscus as seen frequently in stomach and bladder injuries. This hydraulic force stretching the retroperitoneal vessels results frequently in retroperitoneal hematomata.

In considering the pathology which might result from the two types of force; one, "a pointed blow" and second, "a deep crush," Robertson gives a tabulation of traumata possibly following:

A Pointed Blow to the Epigastrium:
1. Contusion or laceration of the liver,
2. Rupture or laceration of the gall-bladder,
3. Rupture or contusion of the stomach,
4. Extraperitoneal hematoma of anterior wall.

A Deep Crush of the Epigastrium:
1. Rupture of the right lobe of the liver,
2. Complete separation of gallbladder.
3. Hematoma of omentum,
4. Contusion or rupture of pancreas,
5. Rupture or contusion of duodenum,
6. Rupture or contusion of jejunum,
7. Retroperitoneal hematoma of posterior wall,
8. Rupture or contusion of transverse colon,
9. Thrombosis of gastro-epiploic vessels,
10. Thrombosis of superior mesenteric vessels,
11. Laceration of mesentery.

A Pointed Blow to the Right Flank:
1. Extraperitoneal hematoma of right wall,
2. Contusion or laceration of right kidney,
3. Rupture or laceration of gallbladder,
4. Contusion of ascending colon.

A Deep Crush of the Right Flank:
1. Fracture of the right kidney,
2. Complete separation of the gallbladder,
3. Rupture of right lobe of the liver,
4. Contusion or rupture of the ascending colon,
5. Thrombosis of colic vessels.

A Pointed Blow to the Left Flank:
1. Extraperitoneal hematoma of the left wall,
2. Contusion or laceration of left kidney,
3. Contusion or laceration of spleen,
4. Contusion of descending colon,
5. Contusion or laceration of jejunum.

A Deep Crush of the Left Flank:
1. Fracture of the left kidney,
2. Rupture of the spleen,
3. Contusion or laceration of descending colon,
4. Contusion or laceration of jejunum,
5. Contusion or laceration of ileum,
6. Thrombosis of inferior mesenteric vessels.

A Pointed Blow to the Lower Abdomen:
1. Extraperitoneal hematoma of the anterior wall,
2. Contusion or laceration of ileum,

3. Contusion or rupture of the bladder,
4. Hematoma or cord at external inguinal ring,
5. Hematoma of omentum.

A Deep Crush of the Lower Abdomen:

1. Rupture of the bladder,
2. Contusion or rupture of the ileum,
3. Retroperitoneal hematoma of posterior wall,
4. Thrombosis of inferior mesenteric vessels,
5. Laceration of the mesentery.

The diagnosis of subcutaneous injuries of the abdomen consists in the correct interpretation of signs of foreign material, either blood or intestinal contents in the free abdominal cavity. Pain and rigidity of the abdominal wall due to irritation of the parietal peritoneum by foreign material are outstanding findings. The demonstration of fluid in the flanks by percussion is significant but its absence is not to be considered as indication of no hemorrhage as it is difficult to demonstrate small amounts, that is, anything less than one liter.

The positive x-ray findings of perforation is pathognomonic and will be considered under gastro-intestinal injuries.

The symptoms and signs of internal injuries have a similarity common to all, whether the internal lesion is of a parenchymatous organ or a hollow viscus. These symptoms and signs may be grouped as the result of two factors; one, those of shock and, secondly, those of hemorrhage and spillage of hollow viscera. Shock is accompanied by pallor, sweating, restlessness, shallow respiration; thin, rapid regular pulse, lowered blood pressure, nausea, vomiting and thirst. Hemorrhage and spillage of hollow viscera are associated with general abdominal pain, painful respiration, boardlike rigidity of the abdomen, general abdominal tenderness, more acute at site of injury and an increase in the white blood count. Peristalsis may not be heard with the stethoscope and percussion may reveal generalized tympany and dullness in the flanks if hemorrhage is sufficient.

In a squeeze of the chest the picture of an internal injury of the abdomen is often present for a few hours after the accident. The abdomen presents a generalized rather than a local rigidity. The localized tenderness, however, is lacking and a careful history of the application of the force will help to clear the diagnosis.

Injuries to the dorsal spinal cord and spinal column also are accompanied by abdominal rigidity. The x-ray and neurological findings, the history of the mechanism of the force applied and the clearing of abdominal symptoms after shock treatment are helpful in coming to the proper diagnosis.

Special Organs. Injuries of the liver. There may be single or multiple lesions of the liver. Generally the capsule of the liver is lacerated. Yet subcapsular rupture may occur and extensive central crushing of the liver parenchyma may be found with tears of only slight extent.

Operative treatment in liver wounds is rather limited in possibilities. If, on opening the abdomen, a clot is noted in a laceration of the liver, it is well to leave the clot undisturbed. Active bleeding is best controlled by sutures and tamponade to care for the bile drainage. Blood free in the abdominal cavity is removed by suction and the wound closed without drainage if on opening the abdomen the laceration of the liver has ceased to flow. Inaccessible tears on the upper and lower surfaces of the liver posteriorly are encountered. Chiari has recommended suturing the liver edge to the parietal costal border in ruptures of the dome of the liver. At the time of operation ruptures of the liver usually are not bleeding as pointed out by Hinton.

Injuries of the spleen. The incidence of involvement of the spleen is about half that of involvement of the liver. Physiological spleenic enlargements and to a greater degree pathological enlargements increase the danger to the spleen in case of violence, especially in enlargement of the spleen by malaria. The diagnosis of spleenic rupture is based on the signs of severe internal bleeding following trauma in the region of the spleen. Due to the nature of the anatomy of the spleen the tears are frequently transverse and multiple. Symptoms of rupture of spleen are those of any other intraperitoneal organ or of hemorrhage with shock, marked in the beginning but may be absent depending upon the amount of hemorrhage. The abdominal pain, which is always present in the early stage, is on the left side of the abdomen and latter becomes more general. Vomiting usually occurs. Tenderness is present in the upper left quadrant. Dullness in the left loin occurs when sufficient hemorrhage

has taken place, accompanied by pallor, rapid pulse, anxiety and leukocytosis. Splenectomy is the safest treatment as splenorrhaphy is unsátisfactory and tamponade is dangerous on account of the secondary hemorrhage following sloughing. Tamponade may be sufficient in slight tears of the spleen.

Injuries to the large blood vessels. Isolated lacerations of a large blood vessel may occur. The diagnosis can never be made with certainty as the hemorrhage is more apt to suggest bleeding from a parenchymatous organ than bleeding from an isolated blood vessel.

Injuries of the pancreas. Isolated injuries of the pancreas are rare and the symptoms of other associated organs always predominate. The spleen and liver are the organs most frequently involved along with the pancreas, and a lesion of the pancreas is as a rule discovered only on exploration of the abdominal cavity. When the laceration of the pancreas presents smooth edges the pancreas and capsule may be sutured and a drain introduced to the suture line. When the trauma is of a crushing nature tamponade and drainage alone may be resorted to. The operative mortality is high in these cases.

Injuries of the gastro-intestinal tract. Because of their frequency gastro-intestinal injuries play an important role in subcutaneous abdominal injuries. The small intestines are most frequently injured, the large intestines next and the stomach least frequently. Rigidity of the abdominal wall, which is first localized and soon begins to spread, is always present.

Injuries to the stomach. Rupture of the stomach is rather infrequent as compared with injuries of the other abdominal viscera. It is situated high in the left hypochondriac region and is thus afforded protection by the lower portion of the thoracic wall. When empty the stomach is less vulnerable than after a full meal or taking of liquids. The full stomach is usually the case when ruptured.

A pointed blow type of force to the epigastrium is the cause of rupture of the stomach. The kick of a horse is a frequent etiological history. A crushing force, or force applied over the entire abdomen, may result in diaphragmatic hernia, the stomach being eviscerated through the diaphragm and taking the spleenic flexure of the colon with it. Such a case came under the writer's care in a coal miner who suffered an abdominal squeeze between a coal car and a coal rib in the mine. Rupture of the stomach is accompanied by severe shock and symptoms of hemorrhage persist after the treatment of shock. Pain is located in the epigastrium. Vomiting is present in varying quantities according to the size of the tear, as a small perforation will be accompanied by a larger amount of bloody vomitus and a large laceration will allow the vomitus and blood to escape into the free abdominal cavity. There is marked rigidity of the upper abdomen. The percussion note may be dull in the flanks if sufficient hemorrhage. Tenderness is most marked in the epigastrium.

Positive x-ray findings of gas bubbles is pathognomic.

The small intestine is the most frequently injured of all the hollow viscera. The movability of the mesentery protects it somewhat against injury yet this same mesentery with its vascular supply of the intestines is an additional element of danger. The upper jejunum and the ileum are the parts most frequently involved. The differential diagnosis between laceration of the small gut and simple abdominal wall contusion is exceedingly difficult, especially in the early stage. The symptoms and signs of hemorrhage and spillage from the gut persisting after shock treatment determine the operative procedure.

Isolated injuries of the mesentery occur with lacerations producing hemorrhage sufficient to cause shock and the classical picture of the symptoms and signs of internal abdominal injury.

Injuries of the colon: The colon is less frequently injured than the small intestines. Rupture of the colon may be into the free peritoneal cavity or posteriorly to its fixed portions into the areolar tissue of the retro-peritoneal space. A classical type of colon injury is that of rupture of the colon by compressed air which is playfully introduced into the rectum via anus by a fellow workman. As a rule the patient or workman who receives the injury is in a bent over position when a playful fellow workman not realizing the danger, places the nozzle of the compressed air tube to the patient's anus. The history of the case along

with symptoms of shock and perforation make the diagnosis simple. E. Willis Andrews was of the early surgeons to report such cases. These accidents now are well known in industry and safety talks concerning this injury are and should be given to workmen handling compressed air.

The x-ray diagnosis of gastro-intestinal perforation is a most useful, positive and definite finding. Popper in 1915 noted fluoroscopically in perforated gastric ulcer a sickle-shaped zone of radiolucence between the diaphragm and the upper surface of the liver. Lenk, a military surgeon, in 1916 reported x-ray observations in abdominal gunshot wounds and emphasized the significance of intra-peritoneal free air in these injuries. Vaughan and Singer during the course of their study of acute abdominal conditions discovered several cases of pneumo-peritoneum following blunt trauma to the abdominal wall as well as in gunshot and stab wounds. Almost without exception every acute abdominal condition with a "free gas bubble" is a case of perforative peritonitis from rupture of a gas containing viscus. This sign is detected with the fluoroscope and need take no more time than five minutes. It is pathognomic along with the history of injury.

Pathological abdominal organs may suffer greatly from slight injuries. The enlarged tense malarial spleen, the enormous liver of cirrhosis and the pyonephrotic and tuberculous kidney are easily ruptured. A slight jarring may cause perforation of a gastric or duodenal ulcer. Corvese reported two cases of rupture of peptic ulcer immediately following x-ray examination with an opaque meal.

"When to operate" is the all important question in internal injuries of non-penetrating force. It is generally recognized that in this type of injury operation should be preceded by the treatment for shock. The demonstration of gas in the free abdominal cavity is a definite sign of perforation and calls for immediate operation.

As pointed out by Lejars, there are two signs of particular importance to influence the surgeon's decision for immediate interference. One is permanent and progressively increasing weakness and frequency of the pulse, usually associated with subnormal temperature, marked pallor, a condition of nervous anxiety, depression or restless excitability, the ordinary consequences of acute anemia. The other is progressive distention of the abdomen, combined with tenderness and rigidity of the abdominal wall which hardens and "defends" itself on slightest touch. On no account should the surgeon wait until signs of infection have developed.

If, however, after shock treatment the patient rallies well and quickly, if the character of the pulse and facial aspect become satisfactory, if there is no increase in the abdominal pain and no distention appears, if flatus and urine are passed and if the x-ray examination is negative for gas bubbles in free abdominal cavity, the surgeon might well hesitate to decide upon an operation. For abdominal contusion without serious viscerial lesion may occur and in general these are the only cases that do recover without operation.

If after shock treatment and an hour or more has passed and the pulse remains feeble, rapid, the temperature subnormal, the extremities and tongue cold, the patient is restless, anxious and his respiration labored, the abdomen becoming rigid, and tender on slightest pressure, particularly so at the point of violence, if there is iliac or flank dullness with resonance in hepatic region and neither urine nor flatus has been passed, with these findings the surgeon should operate at once and not wait for other symptoms.

All perforating lesions of the hollow viscera, all massive hemorrhages from lacerations of the liver and spleen and all ruptures of the bladder and urethra should be operated on and the earlier the better.

The prognosis in subcutaneous abdominal injuries depends upon the time the lesion is diagnosed and treated. In perforations of the gastro-intestinal tract, and in rupture of the bladder and urethra, the percentages of cures will be an indirect ratio to the number of hours elapsed between the accident and the operation. The importance of not overlooking any lesion is often brought out at postmortem after operations.

The treatment of shock is first combated by heat, morphine, Trendelenburg position, subcutaneous normal salt solution and blood transfusion. The systolic blood pressure may be a guide as to a safe time to start surgical

interference after shock treatment. When the systolic blood pressure has returned to between 80 and 100, surgical treatment may be initiated. During this period clinical and laboratory data may be obtained and preparation started in the operating room. During transportation to the hospital much can be accomplished in treatment by warmth and administration of morphine.

2. Penetrating Wounds of the Abdomen

In civil life the most frequent causes of penetrating wounds of the abdomen are due to gun-shot and stab wounds. Gun-shot wounds causing more hemorrhage and more extensive lacerations than stab wounds are accordingly more serious in the ratio of about 2 to 1 as noted by Billings. Injuries which have been overlooked at time of operation are one of the most important causes of the present death rate in perforating wounds of the abdomen.

Stab wounds of the abdomen as a rule do not show much shock unless accompanied by considerable hemorrhage. At County Hospital patients entering with considerable evisceration present but slight evidence of shock may be operated upon immediately and they do well in their recovery.

Penetrating stab wounds, of course, may cause no visceral injury and frequently patients refusing operation are seen to make uneventful recovery accordingly.

Bayonet wounds of the abdomen in war rarely came to the operating table. In two years, 1915 and 1916, with the British Expeditionary Force in France, the writer saw but one bayonet wound of the abdomen. With the American Expeditionary Force in France, in a series of 2525 cases that came under the writer's care in Evacuation Hospital, there was not one bayonet wound. The conclusion is apparent that a bayonet wound inflicted by the enemy is practically always fatal and the cause of death is undoubtedly hemorrhage.

The one case of bayonet wound of the abdomen mentioned is worth relating as it brings out two findings frequently noted in civil life; first, a stab wound through the abdominal wall without visceral involvement and, secondly, hernia following stab wounds.

Traumatic hernia following stab wound: A British infantry man returning from a night raid in "No Man's" land hurriedly jumped into his own trench in the dark. He fell against a bayonet and received a stab wound through the right rectus muscle one inch above the line of the umbilicus. The patient was examined in the hospital six hours after injury. As the belly was soft after this elaspe of time a dressing was applied to the wound and the patient placed in bed and observed. At the end of seven days in bed he appeared completely recovered. But on getting up, a bulging was noted at site of wound. This was noted to increase in size and have an impulse on coughing. A hernia of the posterior sheath was diagnosed and operation showed a portion of omentum plugging the wound in the posterior sheath of the rectus. He made an uneventful recovery.

The diagnosis of penetrating abdominal wounds usually is not difficult as there is the definite external evidence of an injury. The location of the external wound with the history of the manner of its infliction gives the surgeon a rather definite picture of the lesion. However, a visible wound of entrance in the abdominal wall itself is not necessarily accompanied by a wound of a viscus. And on the other hand the abdominal wall may be free from injury and the abdominal viscera suffer where the entrance wound is via chest, pelvis, buttocks, scrotum or rectum, as found in cases of rupture of the colon from compressed air. In many small penetrating wounds the diagnosis is self-evident where there is escape of free blood, fecal material, gas, bile, urine from the wound or where the wound is plugged by omentum or a portion of the gut.

When the wound itself does not give definite information a fluoroscopic examination in gastro-intestinal perforation will show the free bubble of gas in the highest portion of the abdomen, or the sickle shaped outline between the diaphragm and the liver according to the position of the patient.

The symptoms of shock and visceral injury are quite similar to injuries received in non-penetrating wounds and need not be repeated.

Differential Diagnosis: Deflected bullets running a course between the layers of the abdominal muscles are frequently misleading, and alertness on the part of the surgeon will often avoid an unnecessary operation. Bullets entering the abdominal wall at a tangent or slanting angle instead of straight in front or straight in back, that is not at right angles to the coronal section of the body, frequently do not penetrate to the abdominal cavity. There may be two wounds; one of entrance, say, two inches to the right of the umbilicus

and a second in the posterior wall of the abdomen at a corresponding point two or three inches right lateral to the spinous processes and the abdominal cavity escape injury. Or the entrance wound be posteriorly and the exit wound anteriorly. Or, as is commonly the case, an entrance wound in front and the bullet, having expended its force, lying in the abdominal wall posteriorly or vice versa.

A history of the accident in this type of injury is important to establish whether or not the person firing the weapon was standing directly in front of or in back of the patient or whether missile comes from a tangent direction. The clinical findings of slight if any shock, the absences of "signs of a surgical belly" will be of great differential diagnostic value. The greater the duration of time elapsed since the accident without abdominal symptoms, the more certain is the diagnosis of no abdominal viscera injured in such cases.

When to operate: The question of when to operate on penetrating wounds of the abdomen is quite simple as compared to contused abdominal injuries. Wounds perforating the abdominal wall should be subjected to immediate laparotomy and penetrating wounds of the abdominal wall are best explored immediately despite the condition of the patient, provided pre-operative treatment has been given for shock and hemorrhage.

The prognosis in abdominal gun-shot wounds is, as pointed out by Loria, influenced by many factors. In war wounds the irregular and jagged fragments of shells of shrapnel, hand grenades and bombs cause extensive tears of the mesentery, intestines and large blood vessels. Hence the danger of hemorrhage and peritonitis from spillage of the intestines is great. Rifle and machine-gun bullets cause much less damage. Multiple perforations not only cause hemorrhage and peritonitis but prolong the operative procedure, frequently one or more resections of the gut being necessary. Bullets entering the abdomen at close range have greater explosive action and for that reason cause more damage than a bullet shot from a distance. The U. S. Army 45 automatic built for close fighting has a terriffic explosive action and in abdominal injuries is frequently fatal. The fragmentation of lead bullets after striking bony structures tends to cause multiple lacerations. The modern sawed off shotgun with buck shot has taken its place in civil life with fatal results. Shotgun wounds inflicted by bird shot are serious if made at close range as the lacerations of mesentery, viscus and intestines are numerous and extensive. However, bird shot received from a distance has not such a grave prognosis and it is well not to attempt to operate as the lesions are too numerous and the mucosa will generally plug the small perforations made by the shot.

The dried cakes of dirt clinging to the rough woolen clothing of soldiers in trenches are frequent carriers of gas and tetanus organisms and may be carried into the abdominal wall or abdomen by irregular jagged shell fragments. The shorter the elapsed time between receiving the gunshot wound of the abdomen and the time of the operation, the better the prognosis. However, the surgeon should not despair even if a perforation has been present from 13 to 16 hours, as recovery is possible at times. The treatment of shock en route to the hospital and in the hospital before operation is a very influencing factor in the prognosis. The skill of the operating surgeon and the length of time of operation are important factors. The time taken for closure of the laparotomy may often be shortened by the use of a single suture of braided silk going through all coats of the abdomen instead of endeavoring to make layer closures. This is especially true when there is distension of the gut and there is difficulty in replacing it.

Injuries to important blood vessels with hemorrhage are of gravest prognosis. Injuries to the solid organs rate next and lesions of the hollow viscera are least fatal.

Hemorrhage is the one greatest factor in gunshot and stab wounds and the prognosis will depend upon the early control of hemorrhage and treatment for the loss of blood.

Autopsies of operative cases of penetrating wounds reveal hemorrhage with peritonitis as an outstanding cause of death. Pneumonia and subphrenic abscess are frequent. Overlooked wounds in operative cases cause a surprisingly large number of deaths, especially in lower chest wounds penetrating into the upper abdomen. Peritonitis from faulty closure of intestinal perforation is a frequent cause of death.

3. INJURIES OF THE GENITO-URINARY TRACT

Kidney. In injuries to the flank the kidney is most infrequently involved. A preexisting

pathological condition may be present. Blood in the urine discovered for the first time in a routine examination following injury, may be simply one of the signs of a tuberculous kidney. Or the trauma may cause exacerbation of a lesion previously existing. Considering this point, the surgeon should not be too ready to operate simply because blood is noted in the urine following injury. The same holds true for pyogenic infection of the kidney.

Injuries to the kidney may cause rupture of the parenchyma, pelvis or its blood supply. Kidney injuries may result from direct or indirect violence, as an apple may be forced from a tree by knocking it (direct force) or by shaking the limb of the tree (indirect force). So, too, the kidney may be injured by blow or force pushing the kidney against the ribs and transverse processes or snapping it away from its vascular attachments. A patient falling from a height and landing on his feet may suffer a lesion of the kidney vessels from the whipping like force and recoil of force applied to the attachments of the kidney. This mechanism explains the picture when a very minor surface injury is accompanied by a complete rupture of the kidney. A kidney with pelvis distended with urine and at the height of peristaltic emptying is much more susceptible to rupture than one with the pelvis empty.

Pathological lesions following kidney trauma may be tear of the fatty capsule, subcapsular hemorrhage, contusion or laceration of the parenchyma, complete pulpification of the kidney, partial or complete tearing of the pelvis, ureter and blood vessels and rupture of the peritoneum. A tear in the fatty capsule or a subcapsular hemorrhage which is accompanied by hematuria, is not considered an urgent surgical case and should not be operated on. The hemorrhage in a few days will cease. A rupture of the kidney with a tear of a large blood vessel will soon exsanguinate the patient, especially when associated with a tear in the peritoneum and bleeding into the abdominal cavity. An extra-peritoneal hemorrhage may be controlled or bleeding stopped by a perirenal hematoma causing extra renal pressure.

The cardinal symptoms of kidney injury are pain, tumor, hematuria, plus the symptoms of shock. The greatest pain is noted in the relatively benign subcapsular break in the parenchyma where there is capsular and pelvic distension. Laceration of the parenchyma with a break of the capsule causes very little pain. Blood clots passing along the ureter may cause pain of a colicky nature. Tumor formation in the perirenal region is due to hematoma formation and urinary extravasation. This tumor swelling may later extend downward even to the pelvis. Hematuria, though a frequent symptom, may be absent in any type of renal injury as clots may plug the ureter, the ureter may be completely severed or the blood vessels parted from the kidney itself. Blood in the urine, unaccompanied by other findings, following an injury, is no indication for early surgical interference. Other accompanying symptoms and signs and shock must be present. Before operative surgical procedures are started, a bladder observation may be made to establish the presence of the other kidney. Ureteral catheterization with pyelograms are not without danger in traumata of the kidney. McKenna has found intravenous urography most useful in kidney traumata to differentiate whether the kidney suffers a lesion which involves an intraperitoneal or an extraperitoneal tear. After finding the laceration is extraperitoneal and when the amount of extravasation is small, watchful waiting is advised and later a second pyelogram is made to decide whether or not the extravasation has increased in size.

The treatment of kidney trauma in the majority of cases, should be expectant. However, with severe hemorrhage, fast pulse and low hemoglobin and blood pressure persisting after shock treatment, urgent surgery should be instituted. The surgical procedure will be determined according to the pathological findings. Suturing and packing may be employed to approximate fragments and control hemorrhage in parenchymatous tears. Nephrectomy may be the only choice in tears of the kidney with uncontrollable hemorrhage, tears of the large blood vessels and pelvis and when the ureter is entirely separated. Conservatism should be the password in treatment of traumata of the kidney. Allen points out the high mortality in operative cases and no mortality in twenty-five cases that had gross blood in the urine and were not operated on. He might well be quoted: "Injuries of the kidney should certainly not be operated upon, as the vast majority recover spon-

taneously and if in a rare case damage proves sufficiently severe to produce a useless kidney, it can be removed later."—"We are of the opinion, however, that far less harm has come from the unnecessary exploration of a doubtful case, than from waiting until the diagnosis was evident."

Ruptured Bladder. As pointed out by Vaughan and Rudnick, until this last decade positive early diagnosis of rupture of the urinary bladder has been by no means easy. And in many or most cases, the operation was delayed too long to avoid peritonitis. The history of hypogastric injury, blood in the urine and a persistently empty or nearly empty bladder are the indications on which an exploratory laparotomy is most often performed in such cases as have not yet developed peritonitis. Without the history of injury, a ruptured bladder is not infrequently overlooked until necropsy. There are records of many such cases.

Until their work was published there was no pathognomonic sign or combination of signs available in ruptured bladder. Cystoscopy failed due to the presence of blood or inability to fill the bladder with a translucent medicine.

Vaughan and Rudnick described a simple method of making a positive diagnosis of rupture of the bladder by injecting air into the bladder and then employing the x-ray. This method will show whether the rupture is intraperitoneal or extraperitoneal or both, by the course taken by the air injected. In intraperitoneal rupture the air escapes to the highest point of the abdominal cavity or shifts with the changing position of the patient. In extraperitoneal rupture the air follows the perivesical areolar tissue and fascial planes outside the peritoneal cavity. Where there is not a rupture of the bladder, the air is confined and noted in the regular vesical outline. This too, is a valuable method of differential diagnosis of rupture of the kidney from rupture of the bladder.

Dr. Tarnowsky has ponted out the importance of early diagnosis and early treatment in his study of a large series of bladder injuries.

A distended or full bladder is ruptured by force applied to the anterior abdominal wall, but most usually associated with fractured pelvis. Fragments of the pubic bones, sometimes punctate the bladder. Blood in the urine and evidence of extravasation of urine is noted in the soft parts extending upward into the anterior abdominal wall and downward into the upper thigh. The general symptom of shock and hemorrhage may not be pronounced.

The simple test of injecting sterile salt solution into the bladder through a rubber catheter and then aspirating it again, is quite reliable. If all the salt solution is recovered the chances are that the bladder is not ruptured; if the salt solution is not recovered, rupture must be suspected.

Ruptured Urethra. Ruptured urethra is most frequently associated with lower abdominal injuries accompanied by fracture of the pelvis. However, it is often the result of falls in which the patient lands astraddle some blunt object and the urethra is pressed against the bony pelvis, rupturing the membranous urethra. The clinical signs are definite and diagnosis readily made. The history of a trauma to lower abdomen with fracture of the pelvis or a fall, following which the patient is unable to void urine and a catheter cannot be passed but returns wth a small amount of fresh blood following and a distention of the urinary bladder—these findings make the diagnosis comparatively simple. If the patient has not urinated, it is well not to have him try to do so that extravasation of urine into the perineum may be prevented.

The operative technique usually followed in treatment of ruptured urethra has been a suprapublic cystostomy with a perineal incision and a retrograde catheterization from the bladder to the perineum and then from the perineum through penis and out via meatus and an indwelling catheter thus passed with or without a suprapubic rubber tube in bladder or drainage of Space of Retzius.

This method, when an incision has been made in the perineum, results in scar tissue formation causing stricture and the resultant pathology in bladder, ureters and kidneys. The perineal incision should be done away with.

For ruptured urethra the writer has described a method of introducing a catheter from the bladder through the penis without the perineal incision. Two sounds are employed which we may designate *A* male and *B* female. Sound *A* is an ordinary sound with a hole drilled through it about one-half inch from its tip. Sound *B* (female) is cupped on the tip to receive sound *A* after a suprapubic cystotomy has been per-

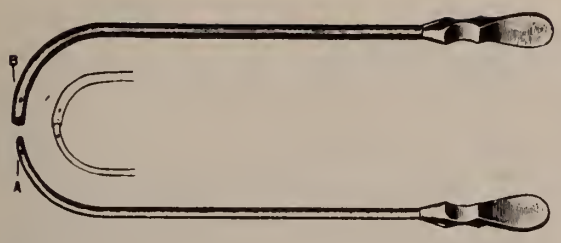


Fig. 1.—Hole is shown in tip of male sound A, through which, when introduced into bladder, a suture is passed. To the suture, the tip of a catheter is tied and then brought from bladder through the urethra. This male sound, A is introduced via meatus of penis. The female cupped sound B, is introduced into urethra via bladder and guides male sound into bladder, after the ends of A and B have engaged, as shown in the small diagram.

formed. Sound *A* (male) is introduced through the meatus of the penis; sound *B* (female) is introduced into the urethra from the bladder. The tips of the sounds in the urethra are then clicked and the male sound is engaged in the cupped end of the female, *B* sound and then the male sound enters the bladder being guided by the female sound. A silk or catgut suture is passed through the drilled hole of the male sound in the bladder, and a rubber catheter is connected to the suture. The sutures are tied and the catheter is introduced from the bladder through the penis and left in place. The cystotomy, of course, is continued for a number of days for drainage.

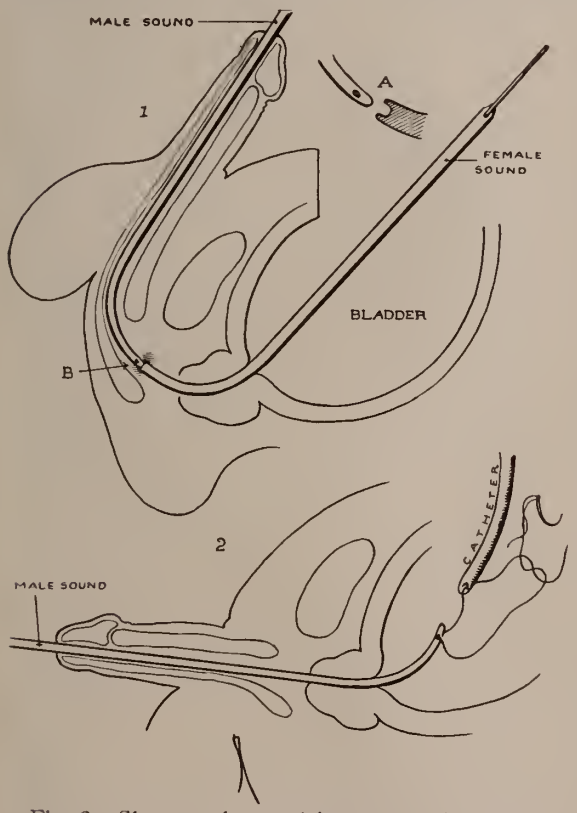


Fig. 2.—Shows male sound introduced via meatus of the penis to site of rupture of the urethra, B, and engaged in the cupped end of the female sound introduced via bladder. A demonstrates the cupped end of female sound and tip of male sound with a hole in it. 2, Male sound with a suture through hole at tip is ready to pull the catheter from bladder through penis.

The great advantage of the operation is that it does away with the perineal incision which undoubtedly, in many cases, causes subsequent strictures. It is a simple method, easily performed and the end-results are gratifying.

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EASY ONE

"Robert," said the teacher, to drive home the lesson which was on charity and kindness, "if I saw a man beating a donkey and stopped him from doing so, what virtue would I be showing?"

"Brotherly love," said Bobby.

TUBERCULOSIS: IS COMPLETE ERADICATION IN SIGHT?*

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Tuberculosis has existed among humans, in civilized communities, for more than 3000 years. Evidences of this fact are had from inspections of ancient Egyptian tombs and from the classical Greek and Roman literature. Since 1838 the incidence of morbidity and mortality has shown a steadily lowered trend.

After the discovery of the tubercle bacillus, by Robert Koch, in 1882, and the vast amount of additional knowledge thus acquired concerning the disease, an organized program of combat was launched in most countries. Such great progress seemed to result that it was predicted, rather generally, that there would be "No Tuberculosis by 1915."

In an address delivered before the National Tuberculosis Association, 1923, Dr. Louis Dublin, Statistician, Metropolitan Life Insurance Company, commented as follows: "The decline in the tuberculosis death rate during the last twenty years is, in my judgment, the most outstanding fact in the tuberculosis problem. This decline has been large in amount and continuous in character. There has been no backsliding; there has never been any doubt as to the tendency of the tuberculosis death rate during the last 20 years." He included in his address a prediction that, based upon the trend of the mortality curve from this disease, a rate of 50 per 100,000 population would be probable for the year 1930. Although without interruption in the downward characteristics of the curve, the line of descent has been somewhat less precipitous and the rate has up to this time not touched below 70 per 100,000. Taking into consideration the annual decrease of approximately 6.6 per cent for the years, 1930, 1931 and 1932, this authority on disease trends considers such rate of improvement to justify another, modified prediction, to the effect that the goal of 40 per 100,000 should be reached for the insured wage-earning group, by 1939, with the possibility of attainment by the general population two or three years earlier.

Harper's Magazine, April, 1929, carried an article "The Conquest of Tuberculosis," suggesting to its readers that " . . . so striking is this declining tendency that there are sober-minded men who talk in terms of the practical elimination of tuberculosis as an important cause of death in the next ten or fifteen years," and calling attention to such facts as, " . . . When analyzed, the figures indicate that the decline which has taken place is responsible for the active presence of 140,000 persons (each year) who would have died from tuberculosis if the rate of 1900 had continued to prevail." Although perhaps the title of the article did suggest definite "Conquest" of tuberculosis, most readers probably overlooked the fact that the disease, tuberculosis, was being merely relegated to the list of those considered in the group of minor causes of death. In such group we find diabetes, for example, and the medical profession must cope with that malady further before making announcement that it has become a vanishing or vanquished disease.

Kendall Emerson, Director of the National Tuberculosis Association, fearful lest such articles might result in an easing up of combat measures, recently cautioned — "Optimistic prophesies about the early eradication of the disease are not only a dis-service to the community, but are not borne out by the facts."

The scope of this paper deals with those facts and will seek to present analyses of the mortality curves, a sketchy hint of epidemiology, and such factors as heredity, predisposition and economic states. Attempt will be made to give proper weight to the relative values of the control program and those brought about through natural processes. And finally, to present an estimate upon the outlook with respect to the complete eradication of the Great White Plague. Comment should be made concerning the question of possible disadvantage to us of a complete elimination of tuberculosis rather than its continued existence in benign form, provided of course that we are in possession of the weapons by which such control may be assured.

Tuberculosis is absent only in those regions inhabited by primitive beings uncontacted by civilization. Bushnell, in his classical treatise

*Read before University Club, Decatur, Illinois, March 2, 1933.

on epidemiology, considers that comprehension of how a general tuberculization influences tuberculosis behavior is dependent upon a knowledge of how people fare who have not had previous contact with the tubercle bacillus.

Tropical races coming into contact with older civilization for the first time react to tuberculous infection by the development of acute, progressive disease. Robert Louis Stevenson furnishes us with perhaps the best lay decription of this, based upon his own observations while living in the Marquesas—"The Marquesan race is perhaps the handsomest extant. Six feet is about the middle height of males; they are strongly muscled, free from fat, swift in action, graceful in repose. To judge by the eye, there is no race more viable; and yet death reaps them with both hands. When Bishop Dordillion first came to Tai-o-hae, he reckoned the inhabitants at many thousands; he was but newly dead, and in the same bay, Stanisao Moanatini counted on his fingers eight residual natives. The tribe of Hapaa is said to have numbered some four hundred when the smallpox came and reduced them by one-fourth. Six months later a woman developed tubercular consumption; the disease spread like fire about the valley, and, in less than a year two survivors, a man and a woman, fled from that newly created solitude." It must be borne in mind that these natives were once strong and well, living a life out of doors, of cleanly habits, and with hunger and want always out of reckoning. Yet chronic tuberculosis was rarely encountered but there prevailed instead an acute and rapidly fatal disease, spreading as an epidemic.

As a tuberculized people, how different is the picture *we* present as compared to that of the non-tuberculized people described by Stevenson, Calmette, and a host of others.

Tuberculization, then, suggests an immunity to be derived from small infections with tubercle bacilli. This immunity is never more than a relative one inasmuch as, under proper conditions manifest disease can result from its activation.

The Contagionists would have us believe that infection is tantamount to already existing disease and that therefore small numbers of tubercle bacilli, acquired under natural conditions, are not in any sense protective.

Support to the illustrations cited in the case of the non-tuberculized races, and to the more generally accepted truth of relative immunity conferred by continuing small infections, is had in the experimental animal. The demonstration can be made in any laboratory and always with the proof of a greater resistance to tubercle bacilli in the case of animals with previous slight infection.

The same group of Contagionists have, very recently, initiated propaganda in favor of a high infectiousness of pulmonary tuberculosis, a doctrine which would result in a renewal of teachings abandoned by the phthisiologists several decades ago as being totally false. Another disastrous result would be the undoing of much of the good already accomplished along the lines of the lessening of the phthisiophobia and the bringing of the early case into the open through attaching no social stigma to the diagnosed individual.

In medicine, fortunately, there are few fads and still fewer faddists. To alarm the populace in the matter of the contagiousness of tuberculosis, in the absence of any specific plan heretofore in effect for the purpose of combating tuberculosis from such angle, and especially in the face of a tremendous lowering of both the incidence and the mortality rates to the extent that there is now some speculation if indeed this disease has been all but conquered, *is,* we may well say, prima facie evidence that the factor of contagion, when exposure to the tubercle bacillus has been neither intimate, prolonged, nor massive, has been without influence upon the success in controlling the disease up to the present. Examples in support of the contention as we have expressed ourselves upon it, are too numerous and varied to be given space in connection with the presentation of this material. The four year period (1928-1932) of "no-incidence" of tuberculosis among student nurses serving at the Macon County Tuberculosis Sanatorium, under a training arrangement with the Decatur and Macon County Hospital, when elimination of all factors predisposing to the development of manifest tuberculosis was sought (but not including undue precautions such as contagion hospital technique), may be offered as a local example. Perhaps the most outstanding example of close (not in-

timate) contact exposure to, and enormous dissemination of, tubercle bacilli, was at Lippspringe, in the Prussian province of Westphalia where consumptives had for the 67 year period prior to 1900 sought curative effects from the mineral baths for which the town was famous—yet without any protective measures in effect during that time the mortality among the natives was diminished to about one-third of its highest rate. Having disposed of the contagion factor, with the reservations stated, and returning our minds to the subject of tuberculization it becomes clear that an infected people is much safer than an uninfected people—i.e., when brought into contact with tuberculosis. The optional tuberculization of a community is wherein the first infection is acquired under the most favorable conditions with respect to health and resistance, and without direct exposure to the known case, and preferably not in earliest childhood. Tuberculin tests serve the purpose of distinguishing the relatively immune from the non-immune healthy subject. The intradermal test can be applied, for this purpose, to all ages, even to early adulthood in those sheltered from infection by wealth or rural habitation.

Calmette had this to say—"The extreme diffusion of tuberculosis throughout the world and the facility with which it is propagated not only by the sick but also by the immense number of apparently healthy individuals who are carriers, lead us to consider as impossible—perhaps not even desirable—the total eradication of tuberculous infection."

A reduction in the incidence of tuberculous infection in the community may be expected to follow the further decline in the phthisis death rate but its effect has been chiefly that of postponing infection until later on, and serving to free the first years of life from the danger of disease—the result of massive infection.

A reexamination, by the tuberculin skin test, of the Framingham, Massachusetts, population, an epidemiological study first begun several years ago, shows a reduction of 23% of infection in the period, 1917-1926, in the same age-group. A curve (illustrated) showing the incidence of infection in European countries definitely indicates what happens when the human sources of bacillary dissemination are reduced. The infection of 90-100% of the people is not reached until the ages 20-24 years.

Is it not rational for us, with such evidences, to accept infection as part of the normal make-up of humans and lay emphasis rather on preventing morbidity?

We have seen that the steady and marked decline in the death rate from tuberculosis has occurred in the face of the universality of infection. What then are those factors which have been responsible for the development of disease in the few? Obviously with the establishment of these etiological factors, we will come upon the major reasons for the favorable trend of tuberculosis, and they will of course lie in the influences which affect the development of disease among the infected.

The mortality rate is improved when cases are diagnosed early and treatment is instituted soon enough so that the disease processes are made inactive—and therefore without killing power. The decline must be attributed largely, however, to those factors which have served to prevent the development of primary or immunity-giving infection into manifest disease. But before undertaking summary of these let us consider those influences finding more or less acceptance by the laity. First, with respect to heredity—no case of fetal tuberculosis has been encountered prior to the establishment of fetal circulation; that is, until it became possible for the mother to actually transmit her disease by reason of tubercle bacilli being present in her blood stream—a rare happening excepting in terminal states. If children, who are the offspring of parents both of whom are tuberculous, at the time of conception, and the mother throughout the carrying period, are separated from their parents immediately after birth, they remain as free from tuberculosis as any other children. In Papworth colony, England, experiment has been made whereby tuberculous parents have kept their children in their own homes, exercising every reasonable care against exposing them to undue infections from themselves. Of approximately 310 children involved in this study none have developed tuberculosis during the period of 11 years reported upon. This furnishes as good illustration as any other of the failure to inherit predisposition or susceptibility to tuberculosis. In those cases suffering undue exposure

and disease, predisposition can neither be proven nor disproven though the possibility does exist that with established tuberculous disease there are predisposing factors of an hereditary nature, affecting its behavior. Sociologists do not give credence to the idea that rich and poor are separated by a zone of different genetic worth, yet the incidence of tuberculous disease is much greater among the latter. As a British authority put it—"If a tiger from the wilds of Africa, who can boast of a line of ancestry as free from tuberculosis as any of us, be brought to this country he will develop tuberculosis."

Most persons are satisfied that health rules are violated in no small degree when fresh air is breathed neither day nor night. It is not true, however, that out of doors occupation is essential to the preservation of health. While it is a fact that waiters, shoemakers, etc., have a high tuberculosis mortality, it is also true that coal miners have the lowest mortality—even lower than that of clergymen, physicians and lawyers whose tuberculosis mortality is exceedingly low.

Krause postulates well when he writes—"I would have the emphasis laid on the behavior of the human being and not on the tubercle bacillus—and I should be contributing not only to the solution of the tuberculosis problem but also to that of public health in general,"—for it is certainly the case that the decline in our mortality rate took place just at the time when, and in those countries where, there was industrial advancement, with the improved standards of living arising from such development.

Factors favoring advance of the disease rate:

1. Industrialization of women, accounting somewhat for the actual advance, since 1915, of the disease incidence in their age group—15 to 30 years.
2. Epidemics—there was registered a "peak" in the rate curve at the time of the 1918 influenza pandemic.
3. Faulty diet—the diet fad, now less faithfully practiced by our women may account somewhat for the 53% increase in the incidence of tuberculosis among them, in the age period—10 to 25 years.
4. Overwork, fatigue, no time spent at leisure, and poor personal hygiene. Ill-ventilated, crowded homes with paucity of opportunity for fresh air and sunlight.
5. Extensive use of milk not pasteurized or from animals not tuberculin tested.
6. Continued, intimate, prolonged and massive exposure to the open pulmonary case.

Following the World War, in many European cities there resulted a precipitous rise in the death rate from tuberculosis—living standards and conditions were desperate—at Belgrade the rate reached 1400 per 100,000. At the same time, in the United States, tuberculosis continued its decline without interruption.

Factors favoring decline of the disease rate:

1. Properly balanced and sufficient food.
2. Good personal hygiene.
3. Uncongested living quarters.
4. Recreation, leisure, short working hours—these resulting from wage income productive of good living standards.
5. Improved house, factory or office ventilation and more time spent out of doors.
6. Periodic health examinations by the family physician, favoring a lowered general death rate; the avoidance of those so-called minor diseases which are nevertheless productive of chronically lowered bodily resistance.
7. Education that should result in lessened contact with any type of infection in the home, with view especially to the avoidance of childhood contact with the possible "carrier" sources.
8. Pasteurization of milk—if not produced from tuberculin tested animals.
9. A school teaching staff certified as being free from manifest tuberculosis.
10. Education to provide a health-conscious public; the periodic tuberculin testing in the schools as pointing to the ease with which the disease may be discovered in its earliest stages.
11. Early diagnosis and early available treatment facilities, for every curable case.

We have endeavored to indicate that those factors which serve to lower the general death rate, or, in other words, favor better conditions of health, appear to influence in like respects the tuberculosis incidence. Can we reconcile the economic strain of the past few years with a continuing betterment of the nation's health. Incidentally Germany is experiencing the same health improvement, while in Russia, health conditions are becoming increasingly poor, associated with a steady rise in the tuberculosis rate—undoubtedly of environmental causation.

We have quoted Dublin earlier in this presentation—let us examine his views as expressed in 1933—"The extremely low death rate of 1932 is all the more remarkable in view of the unfavorable economic conditions which prevailed throughout the year, and which seriously affected living standards of industrial wage-earners and their dependents. With

more of them unemployed than ever before, faced with the worries and perplexities which unemployment brings, their health has been altogether phenomenally good. What factors, then, have operated to turn the worst year of the worst depression in a generation into the best health year of all times?—Of foremost importance is the almost entire freedom of 1932 from serious epidemics—again, weather conditions throughout the year were good; and many people spent more than the usual proportion of their time out of doors. The depression undoubtedly curbed overeating and overdrinking—the people, although against their own will, had more leisure last year than ever before—All of these factors, together, have evidently more than counterbalanced the adverse effects of the worry incidental to unemployment and difficult circumstances. But perhaps more than any other single factor, the protection given by the effective functioning of the health departments, the clinics, by the generous treatment from physicans, and by the splendid organized relief work, has operated to conserve life and health . . .''

Those of us particularly interested in the safeguarding of the public from preventable disease while finding no new major truths in Dublin's report do not find it at all challengeable from the standpoint of self-evident facts.

In this brief treatise, we have shown that the human race, of civilized countries, is well tuberculized from contact with the disease, as far back as there exists authentic records. It is felt that overemphasis has not been made of the fate that awaits those peoples coming into contact with the tubercle bacillus for the first time. If our present period of economic distress is not continued so that almost overnight, as in some portions of ''post-war'' Europe, the gains against the disease covering a period of several decades is not lost, we are facing the evidence that the immunity-giving minor infections may even now not reach us until adulthood, and, as a result, the time might soon be, when the disease would vanish and we might become a nation of non-tuberculized people. On the other hand, we have seen that with a lower incidence of manifest tuberculosis, we may still acquire an immunity through natural means, with the advantage of lesser or even no sacrifice of those succumbing to the disease. The optimal tuberculization would be one of artificial prophylactic immunization, an example of which is B.C.G. At the present time such protective action is small and of short duration. Phthisiophobia, one clearly sees, is unwarranted, in that if tuberculosis were a disease importantly contagious, how difficult it is to account for the fact, that, of those with the seeds of infection, only one out of one hundred falls on other than stony ground.

And, finally, though we have all but conquered tuberculosis, as our rate curves show—surely much remains to be accomplished in that direction when we consider that the enemy, the tubercle bacillus, is capable of, within a short time to reassert itself in devastating fashion and when we consider that though apparently in control, it today kills more people in the United States, between the ages of 15 and 45 than any other disease; one out of every three women of ages 15 to 30 years; and at the same time resulting in 85,000 deaths, annually; and producing the economic losses attendant upon the disability of 500,000 persons.

There must be no false hopes aroused nor curtailment of those factors through which we seek to bring about the ''near'' elimination of that disease of all times, *Tuberculosis.*

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ABDOMINAL EMERGENCIES IN INFANCY AND CHILDHOOD*

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An infant does not have to be very old before he may need a major abdominal operation. In fact he may be born with a condition which demands an immediate, life-saving procedure. The first illustration (Fig. 1), is an example. When



Fig. 1.—Infant Bonicies, Case of Congenital Amnionic hernia the size of grapefruit. Operation one hour after birth, Jan. 7, 1929.

this infant was delivered there was present a complete evisceration of the abdominal contents, except that the viscera were covered by a transparent membrane through which could be seen a portion of the liver, the stomach, and many loops of bowel. The actual defect in the abdominal wall was about four inches long and three inches wide. The entire mass appeared about the size of a grapefruit and from its center projected the umbilical cord. To this condition has been applied the term *"amnionic hernia."* It is of course obvious that a persistence of this condition for more than a few hours is incompatible with life, because this delicate covering membrane may be easily broken, and a fatal peritonitis may develop. I operated upon this child one hour after birth and under ether



Fig. 2.—Same infant as in Fig. 1 about 3 weeks after operation (Jan. 28, 1929).

anesthesia reduced the contents of this sac within the abdomen, the sac itself being invaginated and the skin margins being brought together with interrupted sutures. The postoperative course was quite satisfactory (Fig. 2), until the end of the fourth week when the infant died of pneumonia within a very few hours.

When a baby during the first two or three days after birth presents the clinical signs of acute intestinal obstruction, one may be certain that a *congenital defect* is present in the alimentary tract. The most common sites of such defects, as you all know, are in the esophagus, the duodenum, the terminal ileum, and the anal region. The first of these are always fatal, as the lungs become involved soon after the child begins to take nourishment. When the obstruction exists in the duodenum or the small bowel, a few may be saved by early diagnosis and prompt operation. When the defect exists in the anal region, the results are very much better. I have had occasion to operate upon twelve infants born with acute intestinal obstructions, exclud-

*Read at a meeting of the Chicago Medical Society, February 1, 1933.

ing those where a thin membrane separated the rectum from the anal dimple. Three times the duodenum was obstructed, in six there was an atresia of the small bowel, and in three the rectum itself was involved. I wish to emphasize the fact that even though the diagnosis of congenital atresia of the *duodenum* is usually quite easy, and the clinical picture quite typical yet the condition may easily be confused with congenital pyloric stenosis. To be sure, the symptoms usually begin earlier, usually there is present bile in the material which the child vomits, and usually a tumor mass cannot be palpated, but occasionally the usual conditions are not present, in fact the clinical picture may exactly simulate that produced by a stenosis at the pylorus. This was strikingly brought to my attention about 2 years ago when I entered the abdomen of an infant with what was thought to be a typical congenital pyloric stenosis, only to find a normal pylorus and an artesia of the duodenum close to the ampulla of Vater. In all three of these duodenal atresias a posterior gastroenterostomy was performed. Two of them survived the operation, one being alive and well after two years time, the other succumbing to pneumonia one month after leaving the hospital. The third patient, a Mongolian idiot, came to operation in extremely poor condition and died the following day. With congenital atresias of the *ileum* and *colon* I am not very optimistic. My experience with six such cases, all of which have resulted fatally, has taught me that unless the diagnosis of obstruction is made within the first twenty-four hours and the abdomen can be opened widely enough to locate accurately the site of obstruction and an anastomosis can be made around this point, a fatal outcome is practically certain.

Congenital pyloric stenosis is not, as a rule, thought of as a condition demanding an emergency procedure, because ordinarily the situation is early recognized by the pediatrician, and relief is obtained by the Rammstedt operation while the patient is still in good condition. Too often, however, especially in the charity hospitals, these infants are brought in almost in a condition of extremis, and operation must be performed as an emergency measure. I have learned, too, that after a successful Rammstedt operation has been performed there may arise circumstances which demand immediate surgical interference. For instance, about two years ago at the Cook County Hospital I performed a Rammstedt operation on December 29. The progress during the next nine days was very satisfactory, and the infant gained about 10 ounces in weight. On the tenth day, however, very suddenly, the clinical signs of acute pyloric obstruction returned, with projectile vomiting, peristaltic waves, rapid dehydration, and loss in weight. Without further delay the abdomen was reopened through a left rectus incision and



Fig. 43.—F. McE., January 14, 1931, congenital pyloric stenosis. Rammstedt operation December 29, 1930. Posterior gastroenterostomy January 10, 1931.

Fig. 4.—Same infant shown in Fig. 3. Seven weeks after emergency gastroenterostomy.

Fig. 5.—L. S., age 2 weeks, strangulated inguinal hernia in which the sac was occupied by a gangrenous ruptured appendix.

Fig. 6.—L. S., age 4 weeks. Same infant shown in Fig. 5. Two weeks after operation.

without exploring the site of the former procedure a posterior gastroenterostomy was made. (Fig. 3.) The signs of obstruction immediately disappeared and the further course was uneventful. (Fig. 4.)

The new-born child, having passed the first few weeks of life without incident as far as the necessity for an emergency operation is concerned, is confronted during the next year or two with the possibility of an *intussusception,* a condition which is by all odds the most common cause of acute obstruction in infants and very young children. The amazing thing about intussusception to my mind is that, in spite of the volumes that have been written on the subject, so many cases are not recognized by the general practitioner early and come to the operating table too late for successful surgical relief. In my experience both in charity and private hospital practice, I have been called upon to operate on exactly twenty cases of intussusception, fifteen in infants less than a year old and the remainder under three years of age. Eleven of these children have recovered and nine of them have died. In analyzing the cases which have resulted fatally I wish to point out the following facts:

1. The duration of symptoms was respectively 10 hrs., 18 hrs., 24 hrs., 24 hrs., 48 hrs., 48 hrs., 48 hrs., and 1 week.

2. They all had passed blood per rectum.

3. In all an abdominal tumor was palpable.

4. In two cases the intussusception could *not* be reduced, and in spite of a lateral anastomosis resulted fatally. In the remaining seven, reduction was extremely *difficult* in two, one of which died even though lateral anastomosis was made, and the other, in which lateral anastomosis was not made, death seemed to be due to unrelieved obstruction. Of the five in whom reduction was accomplished *easily,* one died suddenly the following morning with a very high temperature, in one three inches of bowel were gangrenous and had to be resected, in one four inches of bowel were gangrenous and an ileostomy was made, and the remaining two, in which reduction was easily and quickly accomplished, both died of severe toxemia within twenty-four hours after operation.

5. In two instances Meckel's diverticulum was the starting point of the intussusception.

While this mortality rate, which is close to 50 per cent, coincides fairly well with most statistics from combined private and charity practice, it is much higher than should be recorded by men whose work is limited to private

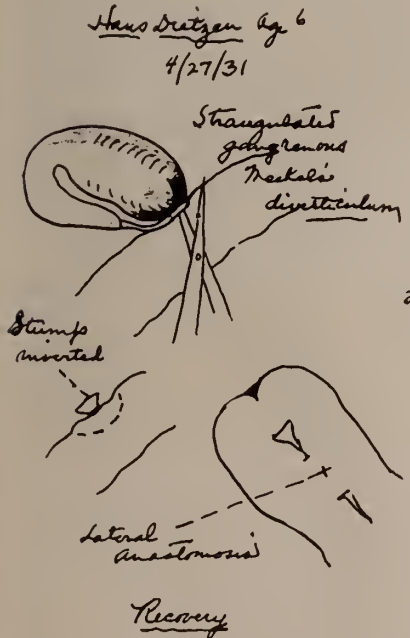


Fig. 7.—Strangulated Meckel's Diverticulum—Resection and lateral anastomosis; recovery.

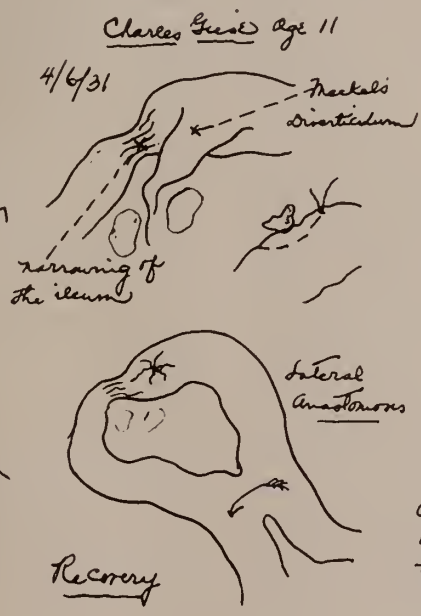


Fig. 8.—Obstruction close to Meckel's Diverticulum. Resection of diverticulum and lateral anastomosis. Recovery.

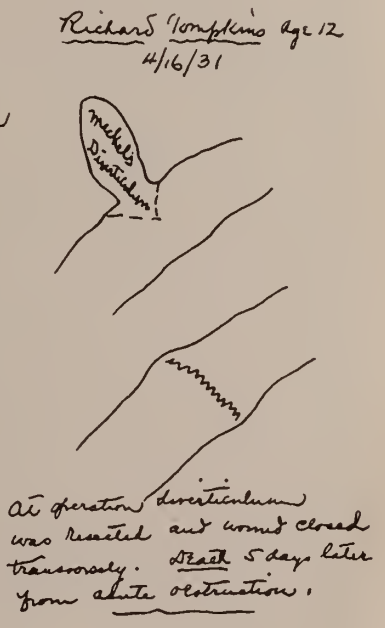


Fig. 9.—Resection of Meckel's Diverticulum with transverse closure of the opening in the bowel. Death later following acute obstruction.

patients, and who have the opportunity of seeing these cases early. The clinical picture in the early hours is ordinarily so typical that a mistake in diagnosis is rarely justifiable. The sudden onset of very evident pain in the abdomen in a child who has been previously healthy, the passage of blood or bloodstained mucus per rectum, the presence of an abdominal mass which is palpable, combined with nausea and vomiting, together make up a picture which is so classic that it should not fail of recognition. During these early hours, too, I have no doubt but that reduction of the intussusception is many times accomplished by an enema given either by the mother herself before a doctor has been summoned, or at the hospital by the doctor's orders. But to rely upon this method as an unfailing means of relief unquestionably carries with it an element of extreme danger, because it is very well known by those most experienced with intussusception that the greatest part of the invaginated bowel can as a rule be easily reduced, but that reduction of the last two or three inches may be not only extremely difficult but even impossible. One cannot be sure, therefore, that an enema even though it contain barium and be given under the fluoroscope will bring about a complete reduction of these last one or two inches of bowel. In fact, many instances are on record where emergency operations have been necessary after reduction has been thought to be complete after using these more conservative means.

There is little that need be said concerning the emergency relief of *strangulated hernias.* Very often an early incarcerated hernia can be reduced without difficulty and without danger by careful application of digital pressure with the patient in the Trendelenburg position, but there is unquestionably danger in applying persistently the same methods when a very evident strangulation of the bowel exists. Here not only obstructive symptoms are present but very often an inflammatory reaction about the tissues in the neighborhood of the hernia. The only safe procedure, once an irreducible hernia is recognized, is immediate surgical operation. This most often consists merely in freeing the involved loop of bowel, applying heat to it for a short period of time, and restoring it to the abdominal cavity. At times, however, the vascular changes have led to a definite gangrene, a condition demanding either a bowel resection, or the establishment of an ileostomy at the site of gangrene without attempting to reduce the loop involved. The decision as to the wisest procedure must depend upon the extent of the local pathology and the general condition of the patient. The accompanying illustration, (Fig. 5) is an example of a strangulated right inguinal hernia in a two weeks old colored baby, where marked cellulitis of the tissues was present and the sac was occupied by a gangrenous ruptured appendix attached to a sliding hernia of the cecum which was strangulated at the internal ring. The removal of the appendix, the reduction of the cecum to the abdominal cavity, and the establishment of thorough drainage led to a prompt recovery. (Fig. 6.)

Meckel's Diverticulum is responsible for a good share of the abdominal emergencies in early life. It may be the starting point of an intussusception, as has been previously stated; it may be the site of a peptic ulcer which may bleed, sometimes to the point of a severe hemorrhage. In this respect, the rectal findings may suggest the presence of intussusception, but according to Brennemann the blood which is passed from an ulcer in Meckel's diverticulum clots normally, whereas that seen with intussusception fails to clot. Such an ulcer may at times perforate, giving rise to a clinical picture which very closely simulates that due to a ruptured appendix. In fact most cases of peritonitis due to this cause are thought, before operation, to be of appendiceal origin. Then again Meckel's diverticulum may be the cause of bowel obstruction, because the cord by which it is attached at the umbilicus may wrap itself around a loop of bowel, or being free in the abdomen may attach itself to a loop of bowel, and thus initiate a process which later on obstructs the lumen. Very often too, the inflammatory process in an acute diverticulitis may result in adhesions which directly lead to the production of obstruction. I wish to emphasize one point in connection with the resection of a Meckel's diverticulum, whether it be acutely inflamed or normal, and that is this: the axis of the resection should always be in the longitudinal direction, the opening in the bowel should always be closed transversely, and *it is a very wise plan* to avoid the likelihood of an obstruction at this site by making a lateral anastomosis immediately around

the loop involved. This fact was very forcefully brought to my mind during this last year when, during a period of four weeks, I operated on three children for obstruction due to a Meckel's diverticulum. In two of these after the resection a lateral anastomosis was performed with uneventful recoveries in both. (Figs. 7 and 8.) In the third case in which closure of the suture line transversely seemed to amply widen the diameter of the bowel at this point, an obstruction later developed which resulted fatally. (Fig. 9.) The experience with this case was strongly confirmed not long afterwards when I was asked to perform an emergency operation during the night on a young woman operated on just a week before by one of the gynecologists. He had removed a chronically infected right tube and ovary to which had been attached the fibrous cord leading to a Meckel's diverticulum. The diverticulum had also been resected and the opening in the bowel closed in the usual way. Obstructive symptoms, however, had very quickly developed and at the end of a week's time there was fecal vomiting and severe toxemia. Upon opening this distended abdomen the obstruction at the original site of the diverticulum was easily found and a lateral anastomosis was made around it, with the result that the obstructive symptoms were at once relieved and an uneventful recovery followed.

I hesitate very much to say anything about *appendicitis* inasmuch as that subject has been so well covered by the paper of Dr. Vaughn, and yet there are one or two things which I believe are worthy of emphasis. It seems to me that most cases of appendicitis fall naturally into one of three groups, each of which can be fairly easily recognized clinically. The *first* are those which from the character of the history, the short duration of symptoms, and the rather typical physical findings, are very evidently cases of acute appendicitis before the stage of perforation. The *second* are those where a perforation has evidently occurred and there has formed a localized abscess, which can be easily palpated. The *third* are those in which there has been a large perforation or a "blow out" of the appendix, with rapid spread of a severe infection and all the clinical signs of a more or less generalized peritonitis. Concerning the *first group,* there is today no dispute as to the proper course of treatment, as it is universally agreed that an appendectomy should be performed at the earliest possible moment. Concerning the *second group,* however, there is considerable dispute as to the best type of treatment. In my opinion, these cases are never abdominal emergencies. In fact experience has taught me that only a small per cent of them need operation at all, because if we follow a conservative course with them we find that most times this palpable mass gradually diminishes in size and finally disappears altogether, and the appendix can safely be removed during the quiescent period two or three months later. Occasionally, however, the mass continues to enlarge, attempts to point either toward the rectum or the anterior abdominal wall, the clinical symptoms steadily become more pronounced and a drainage operation becomes a necessity. This procedure is at that time a safe one, as it involves merely a puncture bluntly into a bulging mass below, or a small incision with the insertion of a drainage tube above. Concerning the *third group* there is even a wider variation of opinion. Some very good men follow a policy of a watchful non-interference with adequate supportive measures. Whereas, many other men, equally good, strongly advocate the opposite procedure, laying particular stress on the value of removal of the appendix and thorough drainage of the pus-filled abdomen. I strongly favor this latter view, not because of any theoretical reasons but because of practical experience with a considerable number of such cases.

Acute intestinal obstruction of the mechanical type is a not infrequent sequel of peritonitis, whether its origin be from the appendix, Meckel's diverticulum, or elsewhere. It is most often the result of adhesions which are formed by the acute inflammatory process, and yet it is sometimes seen following an operation in a clean field. The adhesions may involve one or several loops of bowel, and they may be broad or narrow, like a fibrous cord. The early recognition of the presence of an acute obstruction of this type is most important, and is based upon the cardinal signs of obstructive ileus with which we are all familiar, namely: rhythmic pain, persistent vomiting, and obstipation. The x-ray will usually reveal loops of small bowel distended with gas, and with the stethoscope one may hear the high-pitched tinkling sounds spoken of as "borborygmus." Later on the

rhythmic pain disappears, the distention steadily becomes more marked, borborygmus can no longer be heard, and the abdomen is silent. If the time ever comes when the physician who first sees such a case in its early hours will recognize the presence of acute obstruction and will recommend immediate operation, without delaying in the attempt to differentiate the possible causes of the obstruction, a great step forward will have been made, and the mortality rate will have been reduced to a level comparable to most other acute abdominal emergencies.

In conclusion, I wish to say that these remarks are in no way intended to cover completely the field of acute abdominal emergencies in infancy and childhood, but are rather some of the lessons I have learned from experience. They are presented in the hope that they may be of service to others who are engaged in work in this field.

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HAY FEVER PLANTS AND HAY FEVER POLLEN IN ILLINOIS*

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Local studies of hay fever flora have been made in a number of large cities, but in only a few instances have intensive state-wide surveys been attempted. Heretofore Illinois has not been studied as a state, although considerable work has been done in Chicago. The character of the existing information on Illinois hay fever plants may be judged by the statements in a book written more than ten years ago that yellow foxtail grass is the most important cause of spring hay fever in the state and that cocklebur is more important in fall hay fever than giant ragweed. General statements made by writers who have only text-book information on conditions prevailing in Illinois, are certainly of little help to the busy physician in need of detailed information.

That Illinois lies in the midst of the ragweed area is in itself reason enough for a careful study of the hay fever situation in the state. The results of such a study need not complicate the work of treating hay fever but will for the most part, tend towards simplification by approaching the proper evaluation of known hay fever plants and their pollens.

Method. The dates of pollination of the various plants are determined by field observation, by practical experience in collecting the pollen, and by the appearance and disappearance of the pollen from the air, as determined by pollen slides. The geographical distribution of species has been studied over a period of eight years during which time observations have been made in all cities of 10,000 population or more, and in seventy-five of the one hundred and two counties of Illinois. The relative importance of the various pollens in hay fever is judged by quantitative studies of the pollen content of the air conducted in St. Louis, Chicago and the suburbs of Chicago. Details of the Chicago survey were published in the May issue of the Illinois Medical Journal.

The percentage of various pollens found on pollen slides * as indicated in accompanying figures must not be regarded as an infallible index of the contact of the sensitive patient with pollen. The slides have been exposed in the cities, usually on top of tall buildings. They record the proportions of the various pollens falling out of the upper air but not necessarily the exact proportions which would be encountered near the ground in the suburbs or in the country. Those air-borne pollens which are comparatively heavy, such as grass pollens, are certainly more numerous in the country and near their sources of production than my figures would indicate.

THE STATE

Illinois is an agricultural state. Most of the land is arable and a large proportion under cultivation. Farm woodlands are found in most of the counties, but there are no large forest areas where weeds cannot and do not thrive. Most of the population of Illinois is included in city and suburban areas, but most of the pollen is produced in the country districts. This is proved by the fact that the pollen content of the air is greater in the smaller cities, and usually twice as much in the country as in the center of the large cities. The most significant situation affecting pollen production in Illinois is the large amount of land (six million acres) devoted to

*From the Biological Laboratories of Abbott Laboratories.

*Oil coated microscope slides are exposed, face up, in selected locations usually for twenty-four hours (8 A. M. to 8 A .M.). Pollens are counted under the microscope on a unit area of the slide—1.8 sq. cm.

the production of wheat and other small grains. Corn fields are not usually weedy, but almost every acre of stubble land produces a heavy crop of ragweed between harvest and frost. Add to this, the large amount of pasture and meadow land where ragweeds are often allowed to mature and the neglected areas such as river bottoms, roadsides, and railroad right-of-ways, and the total is a staggering area—estimated at not less than one-fourth of the state.

In Chicago, East St. Louis, and a few of the other larger cities, there are large tracts of waste land, particularly in subdivisions and manufacturing districts. These areas are usually more evident and more unsightly than the weedy stubble fields in the country. They constitute a very definite menace to the people living near them, but their total area is small compared with the whole area of the state—much less than one per cent. If all such weedy areas in the cities could be eliminated by concerted effort, the effect on the pollen content of the air even in the cities, would be but slight. The smaller cities and towns have almost no waste land and very few weeds, so pollens of the smaller cities and towns are the pollens blown into them from the country.

The hay fever plants of Illinois are much the same as those of the surrounding states. The flora of southern Illinois resembles that of Missouri. The amount of pollen and the kinds and proportions of the various pollens found in the air are very comparable in Illinois, Indiana, southern Michigan, eastern Missouri and Iowa.

The Seasons. The three distinct pollen seasons in Illinois are shown on Figure 1. The curve is plotted from pollen counts made in Chicago, where the beginning of the tree season is at least three weeks later than in the southern part of the state, and the grass season two weeks later than in the southern part of the state. Ragweed dates are almost identical for central and northern Illinois, as proved by studies at St. Louis and Chicago. (See Figure 3.) But in the extreme southern end of the state, the onset of the ragweed season is a few days later and the termina-

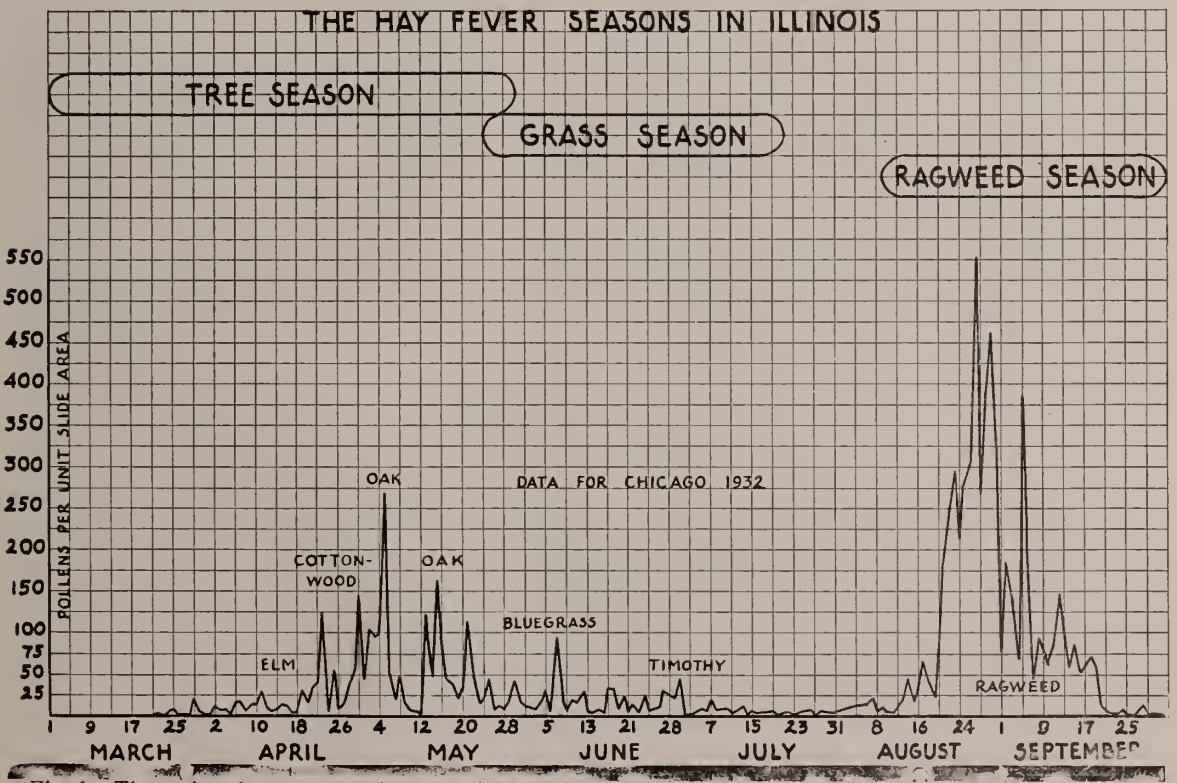


Fig. 1: The assigned seasons, as shown at the top of the Figure, apply to the State as a whole. Necessarily, the beginning of the tree season varies with the latest latitude and is at least three weeks later in the northern end of the state than in the southern end. The graph records the daily total of all pollens found on atmospheric slides exposed in Chicago during 1932. The notations for elm, cottonwood, etc., indicate the predominating pollen in the air at that time. This graph is fairly typical for the state except as noted above.

tion a week or ten days later than shown on the graph.

Trees and Shrubs. Favorable weather in February will cause the maples, elms and hazelnuts to begin to pollinate in the southern part of the state, and unfavorable weather may delay pollination in the northern counties until the first of April. Not only the time of pollination, but the quantity of pollen produced by the trees is much influenced by rain and cold. Tree pollens are not nearly so abundant in Illinois as in states where there are large areas of forests. The bulk of tree pollen found in the air in Illinois is from the oaks, of which there are a number of species in the state. Walnut and hickory pollen are fairly abundant. Elm pollen is very light and when the season is favorable, large quantities of it are found in the air, for a brief season. Cottonwood, maple and elm are much planted as street and yard trees. The maples shed only a

TABLE 1. HAY FEVER PLANTS OF ILLINOIS

Common Name	Botanical Name	Family	Pollinating Season	Distribution	Remarks
TREES					
More Important					
1. Oak	Quercus spp.	Beech	May	Statewide	Much pollen
2. Cottonwood	Populus spp.	Willow	Mar.-April	Statewide	Common street tree
3. Ash	Fraxinus spp.	Holly	Apr.-May	Statewide	Much pollen
4. Maple	Acer spp.	Maple	Feb.-Mar.	Statewide	Small amount of pollen
5. Elm	Ulmus americana	Nettle	March	Statewide	Moderate amount of pollen
Less Important					
1. Box Elder	Acer negundo	Maple	April	Statewide	Pollen not buoyant
2. Walnut	Juglans nigra	Walnut	May	Statewide	Much pollen
3. Hickory	Hicoria spp.	Walnut	May	Statewide	Much pollen
4. Sycamore	Platanus occidentalis	Plane	Apr.-May	Statewide	River banks, streets
5. Tree of Heaven	Ailanthus glandulosa	Ailanthus	June	Locally in cities	Small amount of pollen
GRASSES					
More Important					
1. Bluegrass	Poa pratensis	Grass	May-June	Statewide	Most common grass
2. Timothy	Phleum pratense	Grass	June-July	Statewide	Heavy producer
3. Orchard Grass	Dactylis glomerata	Grass	May-June	Locally and in cities	Heavy producer
4. Redtop	Agrostis palustris	Grass	June-July	Statewide	Moderate amount of pollen
5. Canada Bluegrass	Poa compressa	Grass	June-July	North	A prairie grass
6. Corn	Zea mays	Grass	June-Aug.	Statewide	Pollen not buoyant
Less Important					
1. Bermuda Grass	Capriola dactylon	Grass	May-July	Extreme south	Important when abundant
2. Quack Grass	Agropyron repens	Grass	June	North	Common on moist prairie; little pollen
3. Broom Sedge	Andropogon spp.	Grass	Aug.-Sept.	Center and south	Uplands; small amount of pollen
WEEDS					
More Important					
1. Short Ragweed	Ambrosia elatior	Ragweed	Aug.-Sept.	Statewide	Most important hay fever plant in Illinois
2. Giant Ragweed	Ambrosia trifida	Ragweed	Aug.-Sept.	Statewide	Almost as important as short ragweed
3. Southern Ragweed	Ambrosia bidentata	Ragweed	Aug.-Sept.	Southern ½ Ill.	Very abundant in southern Ill.
4. Burweed Marsh Elder	Iva xanthifolia	Ragweed	Aug.-Sept.	Chicago district	Large amount of pollen produced
Less Important					
1. Cocklebur	Xanthium spp.	Ragweed	Aug.-Sept.	Statewide	Small amount of pollen
2. Marsh Elder	Iva ciliata	Ragweed	Aug.-Sept	Locally in south	Moderate amount of pollen
3. Lamb's Quarters	Chenopodium album	Chenopod	July-Sept.	Statewide	Small amount of pollen
4. Pigweed	Amaranthus retroflexus	Amaranth	July-Sept.	Statewide	Small amount of pollen
5. Spiny Amaranth	Amaranthus spinosus	Amaranth	July-Sept.	Locally in south	Small amount of pollen
6. Western Water Hemp	Acnida tamariscina	Amaranth	July-Sept.	Locally in southwest	In wet fields, produces copiously
7. Hemp	Cannabis sativa	Nettle	July-Sept.	Locally in northwest	Large amount of pollen produced
8. Russian Thistle	Salsola pestifer	Chenopod	July-Sept.	Locally in Chicago area	Small amount of pollen
9. Red Sorrel	Rumex acetosella	Dock	May-June	Statewide	Moderate amount of pollen
10. English Plantain	Plantago lanceolata	Plantain	June-July	Statewide	Not abundant
11. Tall Wormwood	Artemesia caudata	Composite	Aug.-Sept.	Shores of Lake Mich.	Rare except near Lake Michigan

Table 1: The classification as "More important" and "Less important" is necessarily somewhat arbitrary. The assigned rank applies only within the group and has no comparative meaning between groups.

small amount of pollen except in the case of box elder (maple family), and even box elder pollen is heavy and does not carry far. Cottonwood produces abundantly, but the season is short.

Grasses. The grass season begins about two weeks before the termination of the tree season, and ends about three weeks before the opening of the ragweed season. Most of the atmospheric grass pollen in Illinois is produced by bluegrass, (*Poa pratensis*) and timothy, (*Phleum pratense*). Both are regarded botanically as weeds. They are more abundant and as widely distributed as ragweed and are both good producers of pollen, but their pollen is much less buoyant than that of ragweed. Orchard grass, (*Dactylis glomerata*) which comes into bloom a few days later than bluegrass, is also a profuse pollinator but can hardly be classed as a weed. It is rather uncommon except in suburban areas. Redtop (*Agrostis palustris*) is widely distributed as it is often planted with bluegrass and timothy. It pollinates with the latter. Canada bluegrass (*Poa compressa*) is common in the northern half of Illinois, where it is often found with quack grass (*Agropyron repens*) on prairies. Canada bluegrass sheds a fair amount of pollen, while quack grass produces only meagerly. Bermuda grass is a possible factor in the extreme southern part of Illinois. Throughout the southern half of the state, various species of bluestem (*Andropogon*), or broom sedge, are common prairie grasses. They pollinate during the ragweed season but are of doubtful importance.

The cereals, except corn, are of no consequence in hay fever, on account of the small amount of pollen matured. Corn pollen is shed in enormous quantities during July and August, but the granules are so large and heavy that very few of them get into the upper air. The possibility of corn pollen sensitiveness in persons working in or living near a corn field should not be overlooked, especially if they are known to be sensitive to other members of the grass family.

Ragweeds and their Relatives. The outstanding importance of ragweed pollen in hay fever in Illinois is attested by the abundant state-wide distribution of the various ragweeds, the overwhelming proportion of ragweed pollen in the air (see Figures 1 and 2), and the clinical experience of physicans treating allergic diseases. The ragweed pollen crop is influenced most by the amount of rainfall during July. Conditions at this time determine the luxuriance and size of the plants. The serious drought in 1930 resulted in a comparatively small pollen crop and delayed the onset of the season about two weeks, but did not extend the season beyond the usual time. On any given day during the ragwood season the amount of pollen in the air is largely determined by the velocity of the wind. The maximum contamination of the air in Illinois with ragweed pollen usually occurs on warm days with high southwest winds. In Chicago, on account of the lake, wind direction is more important than wind velocity. Rain seldom interferes seriously with ragweed pollination.

Short ragweed, (*Ambrosia elatior*) is found growing abundantly in all parts of the state.

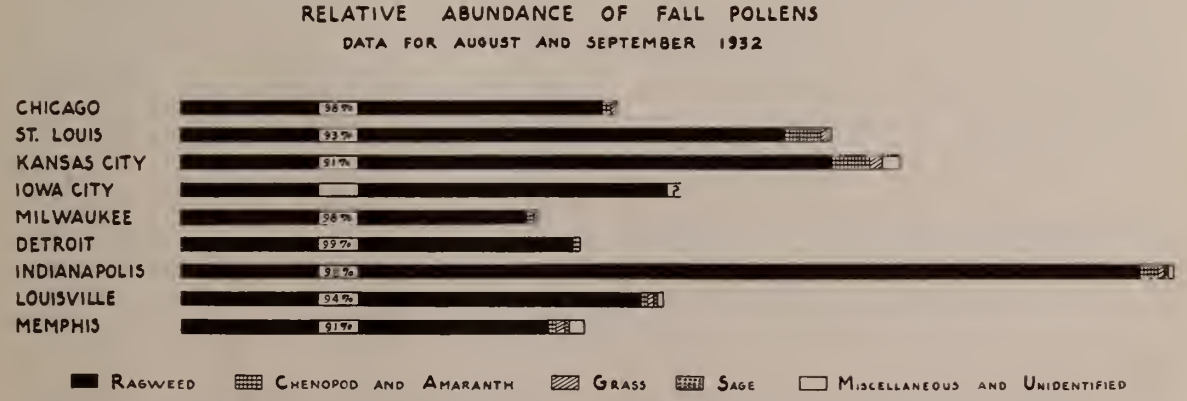


Figure 2: This graph is plotted from the total number of all kinds of pollens found on daily pollen slides, exposed in these cities during August and September by the U. S. Weather Bureau. The overwhelming proportion of ragweed pollen in Illinois and surrounding states is very evident. Please note that these proportions do not apply to the whole season but only to the fall.

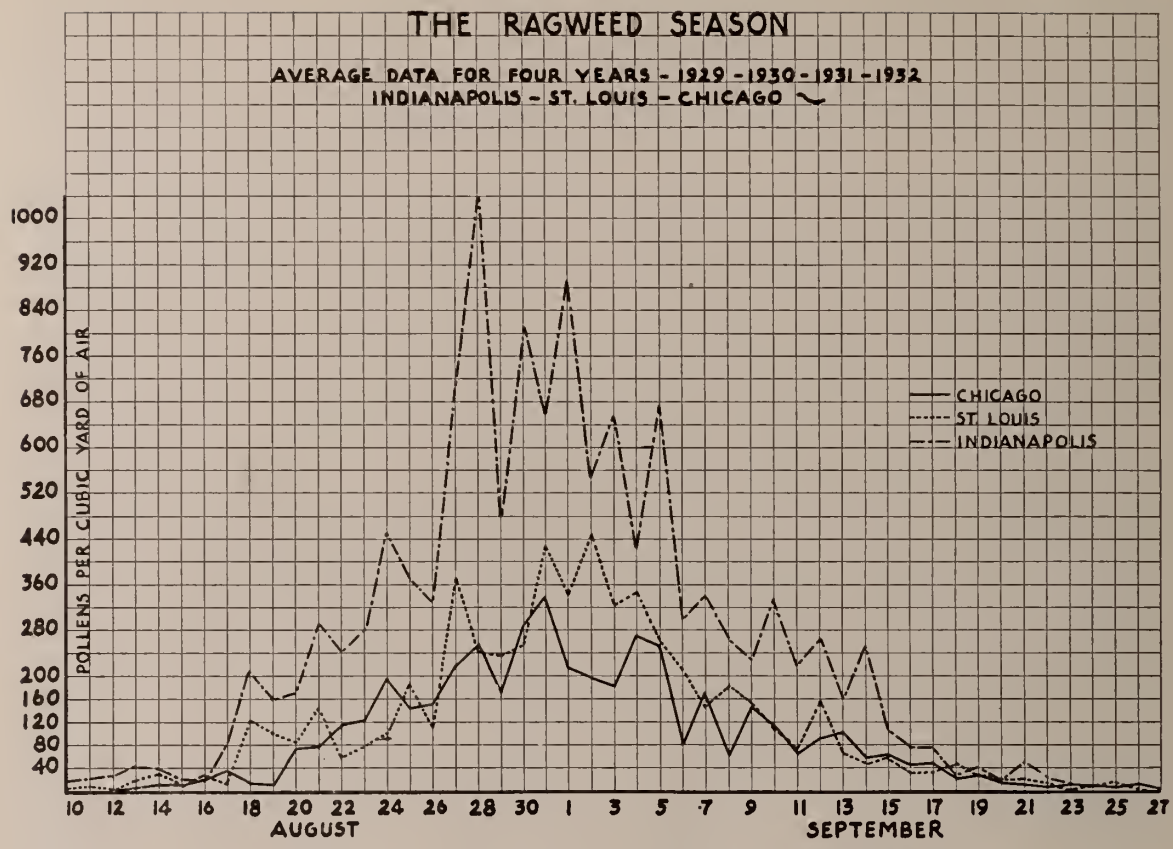


Figure 3: It is interesting to note that over so large an area as here embraced the onset, apex and termination of the ragweed season is so similar. The amount of pollen in the air throughout the country districts of Illinois is known to be greater than the averages found in the center of St. Louis and Chicago. Maximum concentrations are sometimes twice as high as these average figures.

While thriving best on recently tilled land, it will retain a foothold for a number of years in meadows and is the first weed to spring up in almost any neglected spot. Giant ragweed, (*Ambrosia trifida*) is found in all parts of the state of Illinois, but is not found in dry soil and is not common in fields. Ditches, river banks, and moist soil are favorable for heavy growths of this largest member of the ragweed family. Here it produces much more pollen than short ragweed. It begins to pollinate about ten days in advance of short ragweed and continues to produce until the end of September. Its season of greatest activity is about the third week of August. These two common ragweeds furnish more than ninety-five per cent of the pollen in the air during the fall in the north, central and eastern states.

Throughout the southern half of the state a third ragweed—southern ragweed, (*Ambrosia bidentata*) is widely distributed. This plant is also known as lance-leaved ragweed or roadweed. It grows in the same locations as short ragweed but is able to thrive with less moisture. It is found in stubble after the grain has been harvested, in pastures and particularly on dry prairies. Southern ragweed is very common in Washington County. Its season of bloom is about August 20 to September 10. During this time it doubtless contributes a fair proportion of the ragweed content of the air in the southern half of the state.

Cocklebur, also a member of the ragweed family, is found throughout the state, but seldom grows in large areas. The plant is not a heavy producer of pollen and cannot be considered of much importance, compared with other ragweeds.

Two other ragweeds, both of which are of only local importance are marsh elder, (*Iva ciliata*) and burweed marsh elder, (*Iva xanthifolia*) otherwise known as giant poverty weed or

prairie ragweed. The former is found in moist, low lands along the Mississippi and Ohio Rivers. It is common at East St. Louis and at Cairo, and it is reported from Hancock and Union counties. Burweed marsh elder is common in Illinois only in Chicago.

Closely related to the ragweeds are the various sages (wormwood or mugwort), a number of species of which were formerly common on our prairies. Cultivation has almost entirely destroyed the sages. Occasionally specimens may be found on railroad right-of-ways and other virgin soil, but while the pollen is very toxic it is almost of no importance in Illinois. In very sandy soil along Lake Michigan, one species of sage—tall wormwood (*Artemisia caudata*) is a possible local factor, and in a few places in the southern part of the state annual sage (*Artemisia annua*) grows in sufficient quantity in very restricted areas that it could affect a few persons.

Sunflowers are very common in some places in the larger cities, and because of their botanical relation to ragweed, should not be entirely overlooked. Their pollen is a possible factor within a short range of heavy growths of the weeds. Other ragweed relatives (composites) whose pollen is very heavy and under ordinary conditions, is not found in the air are goldenrod, aster, daisy, dandelion and cosmos.

Weeds of Secondary Importance. Aside from the ragweeds, there are no weeds of major importance in the state. Specimens of Russian thistle, which is so important in the Upper Missouri Valley, may be found in various parts of Illinois particularly in sandy soil, but the weeds are not numerous enough to be important, except in a very restricted area near Lake Michigan. Lamb's quarters is widely distributed and abundant and has given considerable attention because it belongs to the same botanical group as Russian thistle. It is especially common in the larger cities, but it sheds only a relatively small amount of pollen. Skin reactions are seldom obtained with lamb's quarters pollen except on individuals who have lived in Russian thistle territory. Pigweed is also common in gardens and rich fields, but like lamb's quarters, is a poor producer of pollen. Western water hemp, a member of the same family as pigweed, is found in moist fields in the southwestern part of the state. It is an abundant producer of pollen, but is not widely distributed. Spiny amaranth, also a relative of pigweed, and a fair producer of pollen, grows only in very rich soil and is of only minor local importance in the southern counties. It is fairly common in Williamson County.

Red sorrel, a member of the dock family, is a common prairie plant, often quite troublesome in grass land and pastures. It yields a fair amount of pollen during the grass season, but the pollen seldom gives skin reactions. During the same season, English plantain (*Plantago lanceolata*) is in bloom. Its pollen is known to be toxic but the plant is not nearly so common in Illinois as in the eastern states. Hemp, (*Cannabis sativa*) is found in moist, sandy soil along the Mississippi River in northern Illinois, where in a few locations it is more common than giant ragweed. As the pollen is known to be toxic and important where abundant, it should be considered as a possible cause of allergy in Whiteside and Carroll Counties.

TABLE 2.—RAGWEED POLLEN CROP FOR ST. LOUIS AND CHICAGO

	1929	1930	1931	1932
Chicago	4132	3046	5018	6020
St. Louis	5686	3487	5573	8619

Table 2: These figures represent the total pollen number of ragweed granules found on daily pollen slides exposed throughout the season at St. Louis and Chicago by the U. S. Weather Bureau.

SUMMARY

1. Ragweed is by far the most important source of hay fever pollen in Illinois.

2. Most of the ragweed pollen in Illinois is produced from grain fields between harvest and the fall plowing.

3. The ragweed season in Illinois is uniform for the northern two-thirds of the state—August 10 to September 30—and slightly later in the extreme south.

4. Southern ragweed is an important hay fever plant in the southern half of the state.

5. Grass pollen is less abundant and less important than ragweed pollen.

6. Tree pollen is much more abundant than grass, but much less important.

7. July rainfall determines largely the volume of the ragweed pollen crop.

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3. Feinberg, S. M., and Durham, O. C.: Hay Fever in Chicago and Suburbs; Clinical, Field and Air Observations, Illinois M. J. (May) 1933.

FOREIGN BODIES IN THE RECTUM

Myer M. Marbel, M.D.

CHICAGO

Because of rarity of such cases and because of a report under similar heading which appeared some time ago in the Illinois Medical Journal, I thought it might be of importance to report this case which is rather unique from the history obtained from the patient.

Responding to an emergency call about four o'clock A.M. to rush prompt aid and relief, to a patient in severe, excruciating pain from some unknown cause, I hurriedly arrived at patient's home and bed, where I found the patient doubled up with pain with plenty of blood stains and fecal particles all over the bed and the patient himself pointing with his finger to the rectal region indicating the source of his present suffering. The patient could not state the reason, cause or the nature of his immediate condition asserting only that the present pain came upon him suddenly awakening him from his sleep about an hour ago or so.

A gloved finger rectal examination of the lower bowel revealed a hard long sharp object lying across the rectal canal with its longest dimension crossways.

Due to a spasm of the sphincter ani below, the foreign body with its sharp long end opposite ends was tightly engaged in the soft structures of the walls of the rectum producing trauma and hemorrhage with each straining for frequent defecations with no possible chance for the examining finger to move it in any direction, sideways, downward or upward in the direction of long exis of the rectal canal.

A hypodermic injection of morphine sulphate gr. ¼ and atropine sulphate, gr.1/100, was admistered immediately, some olive oil was procured from the kitchen cabinet, confiscated for immediate use and freely introduced into the rectal canal, previously placing the patient in the knee-chest position, so as to secure the free and downward distribution of the olive oil by gravity. With gloved hands a hemostat was placed at one end of the foreign body and a tissue forceps at the other end, manipulating the offender to and fro, using the gloved finger as a guide so as not to perforate the soft wall of the bowel. I finally succeeded in dislocating the foreign body from its fixed position into the long axis of the rectal canal and finally instrumental delivery was accomplished with comparative ease, without any further injury to the inner walls or external structures. When removed it proved to be a hard meat bone about three inches long with sharp irregular edges.

The patient, a man about forty years of age, could not explain the presence of this offender in the form of a meat bone in his lower anatomy nor could be think of any possibility how it could have gained entrance into such a sensitive place as the lower bowel, but the supposition was made that perhaps it was the bone of a small round steak he ate a few days before in a downtown restaurant. He thought that he must have swallowed it, not being conscious of the fact, as he was engaged in a hot and exciting conversation with his fellow neighbor at the dining table.

The patient made an uneventful recovery.

3267 S. Halsted Street.

TO A SURGEON

I never knew a pair of hands
Could mean so much to me.
I looked them over once or twice,
To judge their capability.

They're large and strong, I'm very sure,
And, yet, so kind and true,
That they can make an ailing frame,
Quite as good as new.

They brought to me a strengthening
Of faith and hope and such,
A comforting assurance,
I found within their touch.

And so, I gave into their charge
This body, ill, of mine,
Without a single, tiny doubt
Of their mastery divine.

And now that it's all over,
And the mists have cleared for me,
I wish to pay this tribute
To those hands—and surgery.

Ella K. Cheesman

WHAT CAUSED THIS PSYCHOSIS AND WHY THIS TYPE OF PSYCHOSIS?

C. E. Mayos, M.D.
Medical Staff, East Moline State Hospital
EAST MOLINE, ILL.

S. T. A. Aged 20, single, two years high school. *Home broken in boyhood on account of an alcoholic father. There is also an alcoholic history of his paternal grandfather and several uncles.* Patient was in an orphan asylum for about seven years. Finally was given a home by his grandmother at Quincy, Illinois. Nothing unusual happened in his early boyhood. Boyhood occupation was shifting; finally he fell for the glamor of travel and joined the army in 1929. He was sent to the Philippine Islands. Army life uneventful. He drank very little but smoked cigarettes to excess and was in army hospital at Fort Mills, P. I. for a short time in 1931. The nature of his illness was not clear but appeared to be physical. On the next report the patient seemed to be having some kind of a mental upset on the evening of September 12, 1932, at Fort Sheridan. After a month's observation by the Army Medical Officers, patient was transferred to the East Moline State Hospital.

On admission his face was a veritable kaleidoscope of expressions. One minute serious, stern, almost threatening, with fiery eyes and a stiff chin. Then suddenly changing into a broad smile to be in a few minutes transformed into one of extreme thoughtfulness. Eyes looking upward, mouth half open as if in prayer. Patient was living in a world of his own making, reacting only toward his inner thought life. His consciousness could not be entered. At times he performed many grimaces and assumed many peculiar positions such as holding his arms as if aiming a gun and pulling the trigger. He hallucinated freely.

As time went on patient became more quiet. His manner was usually one of apathy and disinterest to his surroundings. Only when old memory patterns were aroused for an old girl classmate did he show any emotion and then he cried and admitted that he was desperately in love with this girl friend of high school days. At these times he seemed like Dante's famous lover "Blown 'round hither and thither in an infinite void." Following is a copy of a recent letter he wrote to this girl friend of other days:

Miss R. S. I am in love with you. I am in love so much with you I don't know what to do without you. I love you and your own *mother* and I want to love you. I will let you be in my arms always and I know you will help me. I love you and I know you will keep me company always and I certainly will. Only you I love, *you and you.* You are only in my arms forever. I am yours forever. I will always help you.

I love you my darling. I will help you. I will help you. I will help. I will keep you. I will fight for you? I will help you.

Your's forever,
I love you S. T. A.

P.S. I still look like C. C. and I certainly am in love. You will please let me love you. I love my country. I love you. I love you and I will obey you. I will never leave home. I will never leave you at night. I will let you never hurt me. I will not disobey you the rest of my life.

Your loving—S. T. A.

P.S. I still look like you.

This is a fairly typical case of Schizophrenic reaction—that personality disorder which is filling and overflowing our private and state institutions with a continuous stream of wrecked humanity. The etiology, we know not. Volumes of arm-chair theories have been written, volumes will continue to be written and we are not so sure that in the final analysis the whole question of etiology will not go back to evolutional development.

The human brain seems pitifully infantile to cope with the complex problems of modern life. Man's central nervous system, since he acquired the higher functions of consciousness and reasoning, has not kept pace with his environmental changes. Most of our "Model T" brains are not adapted to the high speed which we are forced to run them in our present everyday struggle of mere living. In other words, as it has been so aptly stated "Our social inheritence has outrun our germinal inheritance."

It may be merely the battery—an endocrine affair or a chemical reaction defect in the cells themselves. Probably we will never know until we have developed laboratory methods to detect pathology in the living cells as well as the dead.

What are we to do about the treatment of dementia praecox? Is there nothing we can do until we work out the etiology? Certainly, and here is where every parent, school teacher, col-

lege professor, nurse and physician can do his bit. We must try and get hold of the schizophrenic youth before he throws his engine into high and tries to climb hills and go places he has no business attempting.

Many of them can run along on the level in their routine way without a break—and that is what they should be taught to do. We must attempt to devise ways and means of helping those whose brains are not modelled to carry their burdens alone. The shy, nervous, sensitive individuals must be encouraged to talk over their difficulties *freely* and *frankly* and be encouraged to meet life's problems face to face the best they can and not withdraw into a brooding, seclusive, daydreaming world of their own.

Dementia praecox is the big, psychiatric problem now and for the future.

OWNERSHIP OF ROENTGENOGRAMS

The question whether the roentgenograms of a hospital patient belong to the patient or to the hospital was answered by a court for the first time, so far as is known, in *Hurley Hospital* v. *Gage,* decided on appeal, April 21, by the circuit court for the county of Genesee, Mich. The patient had been roentgenographed in the roentgenographic department of the Hurley Hospital at Flint. The usual charge for the service was included in the patient's bill. He made a payment on account but refused to pay the charge for roentgenographic service unless the roentgenograms were delivered to him. The hospital refused to deliver them and sued the patient for the balance due. In the justice's court where the suit was instituted, judgment was given against the hospital. The hospital, however, because of the principle involved, appealed to the circuit court of Genesee County. At the hearing on the appeal, no one appeared on behalf of the patient and the case was heard and judgment rendered without the submission of evidence or argument by him. In giving judgment, the court pointed out that the hospital sold and patients paid for, not the material that went into roentgenograms, but knowledge and experience. The protection of the hospital might depend largely on the proper preservation of the roentgenograms and, said the court, the films should remain with the hospital. Judgment was given against the patient for the balance due on his bill, covering the amount charged by the hospital for the roentgenograms.

MODERN EFFICIENCY

The big hardware man was interviewing his daughter's suitor.

"I regret I cannot see my way clear to allow you to marry my daughter at present, but give me your name and address and if nothing better turns up in the near future you may hear from us again."

TAXES WITHOUT END

Tax his head, tax his hide,
Let the government officials ride.
Tax his cow, tax his pig,
Tax his horse and tax his rig.
Tax his houses, tax his lands,
Tax the blisters on his hands.
Tax his Ford and tax his gas,
Tax the road that he must pass.
Tax the pay roll, tax the sale,
Tax his hard-earned paper kale.
Tax his pipe and tax his smoke,
Teach him government is no joke.
Tax the water, tax the air,
Tax the sunlight if you care.
Tax the living, tax the dead,
Tax the unborn ere they're fed.
Tax his coffin, tax their shrouds,
Tax their souls beyond the clouds.
Tax them all and tax them well,
Tax them to the gates of hell.

TRUE, TOO TRUE!

Old lady (on train platform)—"Which platform for the London train?"

Porter—"Turn to the left and you'll be right."

"Don't be impertinent, young man."

"All right, then, turn to your right and you'll be left!" —Tit-Bits.

HE WONDERED

"My dear," called a wife to her husband in the next room, "what are you opening that can with?"

"Why," he said, "with a can-opener. What did you think I was doing it with?"

"Well," replied his wife, "I thought from your remarks that you were opening it with a prayer."

"I see you're letting your little son drive the car."

"Yes, he's still too young to be trusted as a pedestrian." —Mouthpiece.

SMALL TOWN STUFF

Boy: I was just going to say what a nice joint you have here.—Texas Longhorn.

"Well, what do you think of my game?" said the enthusiastic golfer to his girl-friend.

"Oh, it's all right," replied the little darling, "but I still prefer golf."—College Humor.

Society Proceedings

WINNEBAGO COUNTY

On May 3 the Winnebago County Medical Society and the St. Anthony's Hospital Staff of Rockford put on a Clinic Day which started at 8:30 in the morning and continued through the evening, with a capacity attendance.

At 8:30 A. M. Dr. Robinson Bosworth, Medical Director of the Rockford Municipal Sanitarium, devoted an hour to a presentation of Chest cases.

Dr. James G. Carr, Professor of Medicine, Northwestern Univ., conducted a Clinic on Cardiology from 9:30 to 11:00 A. M.

Dr. Max Wein, Professor of Dermatology, Illinois, gave a Clinic of Skin cases from 11:00 to 12:15 P. M.

The Sisters of St. Anthony's served a Buffet luncheon at the Hospital at 12:30.

Dr. Philip H. Kreuscher, Professor of Orthopedic Surgery, Northwestern University, conducted a Dry Clinic of Bone and Joint cases from 1:30 to 3:00 P. M.

Dr. John A. Wolfer, Professor of Surgery, Northwestern, presented a Surgical Clinic from 3:00 to 5:00 P. M.

Dr. Theodore Lang, Pathologist to St. Anthony's Hospital and Dr. Harold D. Palmer, Pathologist to Rockford Hospital, showed a very interesting Exhibit of Pathological Specimens.

At 6:00 o'clock a Banquet was held at the Elks Club.

The evening paper was given by Dr. Andrew B. Rivers, Department of Internal Medicine, Mayo Clinic, on "The Causes of Vomiting of Blood."

The Clinic was attended by 154 Doctors from the surrounding territory; 71 attended the Banquet, and 92 the evening paper.

The day was a success from every standpoint.

The Winnebago County Medical Society has a meeting every Friday noon at which time the program is furnished by local members with an attendance of 30 to 55. In addition Dr. Palmer of the Rockford Hospital Staff conducts a Pathological Conference every Friday morning from 8:00 to 9:00 o'clock with an attendance of 40 to 60 Doctors and on Thursday mornings Dr. Lang, of St. Anthony's Hospital Staff conducts a Pathological Conference from 8:00 to 9:00 o'clock with an attendance of 25 to 35 Doctors.

Once a month we give a program in the evening, to which outside speakers are invited to give papers and clinics. At the monthly program we have an average attendance of 75 or better. This program is always preceded by a Banquet in honor of the Speakers and is always well attended.

Our Society has a Membership of 102 with an excellent "esprit de corps" and a feeling of co-operation.

E. H. Quandt.

Marriages

Herbert Spencer Sarnoff to Miss Beatrice Diamond, both of Chicago, March 22.

Arthur D. Wilson, Carrollton, Ill., to Miss Gudrun O. Birger of Chicago, in Champaign, April 16.

Personals

Dr. George B. Lake was invited to address the First Methodist Church of Urbana Sunday morning, May 7, on "Mental Hygiene."

Dr. Francis L. Foran gave a paper on "Allergy" before the Scott County Medical Society, Davenport, Iowa, on May 2.

Dr. Nelson M. Percy gave an address on "Goiter" before the Will-Grundy County Medical Society at Joliet, May 3.

Dr. Stanley Gibson addressed the Clinton County Medical Society, Clinton, Iowa, on May 4.

Dr. R. K. Packard gave a talk on "Medical Economics" at the Annual Meeting of Henry County Medical Society, Kewanee, May 4.

Dr. Hugo Deuss spoke over WGN, May 10 on the subject, "The Source of Tuberculosis in the Various Age Groups," under the auspices of the Chicago Tuberculosis Institute.

The Michael Reese Internes' Alumni and Hospital Staff Association held its annual reunion on May 18. The program consisted of surgical clinics, ward walks, a pathology conference, laboratory and tumor clinic demonstrations and medical motion pictures.

On May 1, 1933, Dr. John G. Frost was appointed Chief Surgeon of the Chicago and Western Indiana Railroad Company and the Belt Railway Company of Chicago.

On Wednesday, May 17, over Station WGN, Dr. Max Biesenthal discussed "The Importance

of Symptoms in the Diagnosis of Tuberculosis,'' under the auspices of the Chicago Tuberculosis Institute.

Drs. Geza deTakats and Eugene A. Edwards presented the scientific program at Ford County Medical Society on May 11. Doctor deTakats talked on ''Varicose Veins'' and Doctor Edwards presented the moving picture film on ''High Fundic Amputation of the Uterus for Pelvic Residues.''

Dr. Robert H. Herbst addressed the Lake County Medical Society on Tuesday, May 9. Subject: ''Transurethral Electro-Resection of the Prostate Gland.''

Dr. W. A. Newman Dorland addressed the staff of the Ravenswood Hospital, May 24, on ''The Origin of Ovarian Tumors.''

Dr. Clement L. Martin gave an address on ''Perianal Tuberculosis'' before the county medical society at Kenosha, Wisconsin, May 23.

The annual meeting of the American Proctologic Society will be held in Chicago, June 11, 12 and 13, 1933.

Dr. Laurence H. Mayers addressed LaSalle County Medical Society on May 9 on ''Arthritis.''

Jacob Meyer gave a talk on ''Medical Aspects and Treatment of Gastric and Duodenal Ulcer'' at the May 10 meeting of Will-Grundy County Medical Society.

Dr. Janet S. Barnes, Ann Arbor, addressed the Chicago Council of Medical Women, May 5, on ''Problem Parents of the So-Called Problem Children.''

Dr. Arthur C. Christie, Washington, D. C., addressed the Chicago Roentgen Society, April 20, on ''Relation of the Medical Profession to the Costs of Medical Care.''

Dr. Edward A. Bullard, New York, among others, addressed the Chicago Gynecological Society, May 19, on ''Cervicitis and Its Operative Treatment.''

Dr. William P. MacCracken, senior medical examiner for the aeronautics branch of the U. S. Department of Commerce in this area, has been appointed medical director of the American Air Races to be held at the Chicago airport, July 1-4.

Speakers before the Chicago Pathological Society, May 8, included Drs. Victor Levine on ''Chronic Embolism of the Lungs''; William R. Williams, Riverside, Ill., ''Experimental Studies of the Effects of Lung Compression on the Pulmonary Circulation,'' and Perry J. Melnick, ''Theca Cell Tumors of the Ovary.''

Dr. Ernest E. Irons, dean, Rush Medical College, has been appointed chairman of the department of medicine, succeeding Dr. George F. Dick. Dr. Dick continues as professor in the department of medicine at the college and as professor and chairman of the department of medicine in the Division of Biological Sciences, University of Chicago.

Dr. John A. Ascher was elected mayor of Freeport, April 4, and he assumed office May 1. Dr. Ascher, who is a member of the board of censors of the Stephenson County Medical Society, was president of the society in 1926. In Sparks, Nev., where he practiced for several years, Dr. Ascher served at different times as city and county health officer.

Drs. Francis L. Lederer and Frederick H. Falls of the University of Illinois were guests of the Dubuque County Medical Society at Dubuque, Iowa on May 9, 1933. Dr. Lederer addressed the Society on ''Modern Concepts in the Diagnosis and Treatment of Sinus Conditions.'' Dr. Falls on ''Pregnancy and Tuberculosis.''

Dr. Leon Unger addressed the Parent-Teacher's Association at the O'Keeffe School May 15 on ''Hay Fever and Suggestions for Preventing it and its Complications.

Dr. K. B. Rieger, Freeport, was appointed Health Commissioner of the City of Freeport, May 1, 1933.

Dr. Max S. Wien, conducted a Skin Clinic for a joint meeting of the St. Anthony Hospital Staff and the Winnebago County Medical Society, at Rockford, Ill. on May 3, 1933.

News Notes

—At the annual meeting of the Chicago Tuberculosis Society, the following officers were elected:—

President.....Dr. Otto C. Schlack
Vice President.....Dr. Aaron Arkin
Secretary and Treasurer
.....Dr. Ellis B. Freilich

—There will be a meeting of Registered Laboratory Technicians, June 12 and 13, at the Medinah Athletic Club, 505 North Michigan Boulevard, Chicago. The purpose of this meeting is to organize a National Assoeiation. All Registered Technicians are urged to be present. An interesting program and entertainment have been provided.

—Medical students are to be admitted once a year beginning with the autumn quarter, 1933, according to the *News Bulletin* of the Division of Biological Sciences, University of Chicago. Heretofore, medical students have been admitted during each quarter.

—Dr. James Ewing, professor of oncology, Cornell University Medical College, and director, Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York, delivered the second Frank Billings Lecture of the Thomas Lewis Gilmer Foundation of the Institute of Medicine of Chicago, May 26. Dr. Ewing's subject was "The Depression: Its Effects on Medicine, Research and Practice."

—The dedication of the building and 1,000,000 volt transformer of the Mercy Hospital Institute of Radiation Therapy occurred May 11 with addresses by Rev. Robert M. Kelley, S. J., president, Loyola University; Dr. Jennings C. Litzenberg, University of Minnesota Medical School, Minneapolis; William D. Coolidge, D.Sc., director of research laboratory, General Electric Company, Schenectady, N. Y.; Dr. Herman L. Kretschmer, president, Chicago Medical Society, and Dr. Louis D. Moorhead, dean, Loyola University School of Medicine.

—More than $100,000 has been bequeathed to the University of Chicago for the treatment of crippled children, by the will of the late Mrs. Gertrude Dunn Hicks. In 1927, Mrs. Hicks gave the university $300,000 for the construction of the Gertrude Dunn Hicks Memorial Hospital for Crippled Children, in which fifty beds are available for children whose families are unable to provide medical care. It is planned to hold the principal of the recent gift in trust for ten years. The aggregate income then will be placed in trust to provide a fund for the operation of the hospital, the principal to become the property of the university outright.

—Precautions are being planned by the Chicago Health Department for health of the visitors to the Century of Progress Exposition during the coming summer. Particular attention will be paid to water and sewage disposal, purity of food and milk, examination of employees, and adequate comfort stations and drinking fountains. The department will have complete control over all other health matters. The fair grounds will be under the same health supervision as the rest of the city. Tourist camping grounds within the city limits wll also be under strict supervision, while outside camps will be under the control of state authorities. Tourist camps desiring the sponsorship of A Century of Progress must submit their plans

for sanitary facilities and the control of communicable diseases to the health department for approval before any action will be taken by exposition officials. Food handlers have already been examined for communicable disease.

—S. 566 and S. 567 propose to create a board of examiners for practitioners of physiotherapy and to regulate that calling. Physiotherapy is defined as "the diagnosis and treatment of human ailments by the use of any natural force or agency, to wit, water, heat, sunlight, electricity or electrically produced energies, ultraviolet light, infra-red light, manipulation, massage, or other natural means without the use of medicine or operative surgery." Applicants for such licenses must be 21 years of age, of good moral character, have graduated from a high school approved by the department of registration and education and have studied physiotherapy for two years in schools of physiotherapy approved by the department. S. 572 proposes to repeal the act regulating the practice of beauty culture. H. 768 proposes to authorize the asexualization of certain socially inadequate inmates of state institutions.

—Crime as a mental health problem will be discussed in a new series of radio talks, sponsored by the Illinois Society for Mental Hygiene over Station WGN, Chicago, beginning May 25. Dr. H. Douglas Singer, professor of psychiatry, University of Illinois College of Medicine, will treat this phase. Other speakers and their subjects in the series will be:

Clifford R. Shaw, Ph.D., research sociologist, Institute for Juvenile Research, Causative Factors in Delinquency, June 1.

Dr. David B. Rotman, Psychiatric Institute, Municipal Court, Mental Disease and Crime, June 8.

Dr. John A. Larson, assistant state criminologist of Illinois, Psychological Factors in Crime Detection, June 15.

Dr. Harry R. Hoffman, director, behavior clinic, criminal court, The Mentally Defective Delinquent, June 22.

Dr. Paul L. Schroeder, state criminologist of Illinois, Mental Health Measures in Prison Care, June 29.

Deaths

Helen B. Bodelson, Rock Island, Ill.; Woman's Hospital Medical College, Chicago, 1878; aged 91; died, April 13, of bronchopneumonia.

Fred W. Braner, Collinsville, Ill.; American Medical College, St. Louis, 1897, a Fellow, A.M.A.; aged 62; died, April 9, of erysipelas.

Harvey J. Churchill, Pekin, Ill.; National Homeopathic Medical College, Chicago, 1893; aged 85; died, April 14, in Los Angeles, of complications resulting from a fall.

James Tracey Joiner, Herod, Ill.; St. Louis College of Physicians and Surgeons, 1909; aged 53; died, March 2, in the Lightner Hospital, Harrisburg, of cerebral hemorrhage.

Luther H. Morgan, West Franklin, Ill.; American Medical College, St. Louis, 1894 and 1896; also a minister; aged 63; died, February 5, of valvular heart disease.

Nathaniel Curtis Rogers, Chicago; University of Pennsylvania School of Medicine, Philadelphia, 1907; aged 50; was found dead, March 16, of chronic myocarditis and nephritis.

Benjamin Franklin Roller, Chicago; University of Pennsylvania School of Medicine, Philadelphia, 1902; member of the Medical Society of the State of New York, and the Illinois State Medical Society; aged 56; died, April 20, in the Doctor's Hospital, of pneumonia.

Albert Jacques St. Germain, Chicago, Rush Medical College, Chicago, 1921; aged 38; on the staff of St. Luke's Hospital, where he died, April 28, as the result of injuries received in an elevator accident in the building in which he resided.



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(Continued on page 23)



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(Continued from page 22)

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(Continued from page 6)

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